



주간 건강과 질병

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## Aims and Scope

주간 건강과 질병(Public Health Weekly Report) (약어명: Public Health Wkly Rep, PHWR)은 질병관리청의 공식 학술지이다. 주간 건강과 질병은 질병관리청의 조사·감시·연구 결과에 대한 근거 기반의 과학적 정보를 국민과 국내·외 보건의료인 등에게 신속하고 정확하게 제공하는 것을 목적으로 발간된다. 주간 건강과 질병은 감염병과 만성병, 환경기인성 질환, 손상과 중독, 건강증진 등과 관련된 연구 논문, 유행 보고, 조사/감시 보고, 현장 보고, 리뷰와 전망, 정책 보고 등의 원고를 게재한다. 주간 건강과 질병은 전문가 심사를 거쳐 매주 목요일(연 50주) 발행되는 개방형 정보열람(Open Access) 학술지로서 별도의 투고료와 이용료가 부과되지 않는다.

저자는 원고 투고 규정에 따라 원고를 작성하여야 하며, 이 규정에 적시하지 않은 내용은 국제의학학술지편집인협의회(International Committee of Medical Journal Editors, ICMJE)의 Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals (<https://www.icmje.org/>) 또는 편집위원회의 결정에 따른다.

## About the Journal

주간 건강과 질병(eISSN 2586-0860)은 2008년 4월 4일 창간된 질병관리청의 공식 학술지이며 국문/영문으로 매주 목요일에 발행된다. 질병관리청에서 시행되는 조사사업을 통해 생성된 감시 및 연구 자료를 기반으로 근거중심의 건강 및 질병관련 정보를 제공하고자 최선을 다할 것이며, 제공되는 정보는 질병관리청의 특정 의사와는 무관함을 알린다. 본 학술지의 전문은 주간 건강과 질병 홈페이지(<https://www.phwr.org/>)에서 추가비용 없이 자유롭게 열람할 수 있다. 학술지가 더 이상 출판되지 않을 경우 국립중앙도서관(<http://nl.go.kr>)에 보관함으로써 학술지 내용에 대한 전자적 자료 보관 및 접근을 제공한다. 주간 건강과 질병은 오픈 액세스(Open Access) 학술지로, 저작물 이용 약관(Creative Commons Attribution Non-Commercial License: <http://creativecommons.org/licenses/by-nc/4.0>)에 따라 비상업적 목적으로 사용, 재생산, 유포할 수 있으나 상업적 목적으로 사용할 경우 편집위원회의 허가를 받아야 한다.

## Submission and Subscription Information

주간 건강과 질병의 모든 논문의 접수는 온라인 투고시스템(<https://www.phwr.org/submission>)을 통해서 가능하며 논문투고 시 필요한 모든 내용은 원고 투고 규정을 참고한다. 주간 건강과 질병은 주간 단위로 홈페이지를 통해 게시되고 있으며, 정기 구독을 원하시는 분은 이메일(phwrcdc@korea.kr)로 성명, 소속, 이메일 주소를 기재하여 신청할 수 있다.

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## 2023년 법정감염병 신고 현황

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질병관리청 감염병정책국 감염병정책과

### 초 록

질병관리청은 2023년에 신고된 법정감염병 발생, 사망 신고 현황을 분석·정리한 「2023 감염병 신고 현황 연보」를 2024년 6월 28일에 발표하였다. 법정감염병은 제1급부터 제4급까지 「감염병의 예방 및 관리에 관한 법률」과 「질병관리청장이 지정하는 감염병의 종류 고시」에 따라 정의되며, 총 89종이 있다. 2023년에는 전수감시감염병 66종 중 42종의 감염병이 신고되었고, 24종은 신고 건이 없었다. 2023년 전수감시감염병 신고 건은 5,626,627건으로 2022년 신고된 28,517,180건 대비 크게 감소하였으나, 코로나바이러스감염증-19(코로나19) 제외 시 2023년 109,087건으로 2022년 92,831건에 비해 신고가 17.5% 증가하였다. 전년 대비 신고 건이 증가한 주요 감염병은 수두, 카바페넴내성장내세균목(carbapenem-resistant *Enterobacterales*, CRE) 감염증, 유행성이하선염, 말라리아 등이며, 감소한 주요 감염병은 코로나19, 결핵, 바이러스간염(A형간염, C형간염), 쯤쯤가무시증, 후천성면역결핍증 등이었다. 2023년도에 신고된 해외 유입 감염병은 7,122건으로 전년 대비 87.3% 감소하였으나 코로나19를 제외하면 113.7% 증가하였다. 주요 해외 유입 감염병은 코로나19, 뎅기열, 말라리아 등이다. 2023년도에 신고된 사망자는 결핵 제외 4,624명으로 2022년 대비 83.0% 감소하였으나 코로나19를 제외 시 2022년 대비 20.1% 증가하였다. 사망자가 발생한 주요 감염병은 코로나19, CRE 감염증 등이다.

**주요 검색어:** 감염병 신고; 공공 보건; 질병관리청

### 서 론

질병관리청은 국가승인통계인 「법정감염병발생보고」를 기초로 통계를 공표하고 있으며, 2001년부터 해마다 연보를 발행하여 2024년 6월 28일에 「2023 감염병 신고 현황 연보」를 발표하였다[1,2]. 법정감염병은 제1급부터 제4급까지 모두 89종이 있으며, 「감염병의 예방 및 관리에 관한 법률」과 「질병관리청장이 지정하는 감염병의 종류 고시」에 따라 정의된

다. 전수감시 대상 감염병은 제1급 감염병부터 제3급 감염병까지로 총 66종, 표본감시 대상 감염병은 제4급 감염병으로 총 23종이며, 1년간 전수감시, 표본감시 대상으로 신고된 감염병을 확인하고 정비하여 보도자료와 「감염병 신고 현황 연보」 등으로 승인통계를 공표한다.

이 보고서에서는 「2023 감염병 신고 현황 연보」의 일부를 발췌하여 2023년에 발생한 법정감염병 현황과 코로나바이러스감염증-19(코로나19) 팬데믹 상황과 안정화 이후의 감염병

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## 핵심요약

### ① 이전에 알려진 내용은?

2020년부터 2022년까지 지속된 코로나바이러스감염증-19(코로나19)의 유행으로 감염병 전파 차단 조치가 강화되었고, 2023년 코로나19 유행 양상 변화에 따른 위기단계 하향이 이루어졌다.

### ② 새로이 알게 된 내용은?

2023년 법정감염병 신고 건은 5,626,627건으로, 2022년 28,517,180건 대비 크게 감소하였으나, 코로나19(5,517,540건)를 제외 시 신고 건은 109,087건으로 전년(92,831건) 대비 17.5% 증가하였다.

### ③ 시사점은?

코로나19 유행이 안정화되었으나, 감염병에 대한 예방관리 대책과 더불어 국민들의 손 씻기·기침 예절 생활화로 감염병 예방행태를 유지하는 것이 매우 중요할 것으로 판단된다.

발생 추세를 제시함으로써 앞으로의 감염병 예방 및 관리에 필요한 기초자료를 제공하고자 한다[3].

## 방 법

감염병 발생과 관련된 자료 및 매개체에 대한 자료를 지속적, 체계적으로 수집, 분석 및 해석하고 그 결과를 적시에 필요한 사람에게 알려 감염병 예방 및 관리에 사용하도록 하는 과정을 감염병 감시(infectious disease surveillance)라고 한다[4]. 법정감염병은 「감염병의 예방 및 관리에 관한 법률」 및 「질병관리청장이 정하는 감염병의 종류 고시」에 따라 1-4급으로 총 89종이며, 발생 자료는 의료기관 등에서 감염병 환자를 진단, 신고한 자료를 기초로 하고 있다.

법정감염병 감시 방법은 크게 세 가지로 모든 의료기관에 신고 의무가 있는 전수감시(mandatory surveillance), 발생 규모가 크거나 신속한 유행 감지가 필요한 질환을 모니터링하기 위해 표본기관을 대상으로 하는 표본감시(sentinel

surveillance), 비법정감염병의 유행 예측 및 관리를 위한 보완적 감시 체계인 보완감시(complementary sentinel surveillance)가 있다.

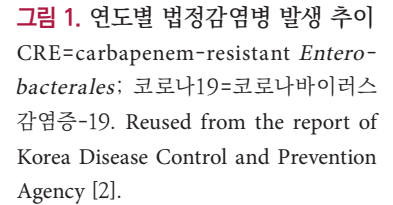
전수감시는 「감염병의 예방 및 관리에 관한 법률」 제11조에 의하여 모든 의사 등 신고의무자가 제1급-제3급 감염병 진단 등을 했을 경우 관할 보건소에 신고하여 운영하는 것으로, 발생 또는 유행 시 제1급 감염병은 즉시, 제2급 및 3급 감염병은 24시간 이내에 신고하여야 한다. 표본감시는 감염병 예방법 제11조 제5항에 의하여 제4급 감염병 진단 등을 했을 때 감염병별 지정된 표본감시기관에 한해 신고를 받아 운영된다. 표본감시기관에서는 감염병을 확인한 후 7일 이내에 신고해야 하며, 감염병별 표본감시기관 지정기준에 따라 운영된다.

본 보고에서는 2023년 법정감염병 전수감시 대상에 대한 신고현황, 급별 신고 현황, 해외 유입 현황, 사망 신고 현황 등을 기술통계를 사용하여 분석한 주요 결과를 정리하여 제시하였다.

## 결 과

### 1. 법정감염병 신고 현황

2023년에는 66종의 전수감시 대상 감염병 중 42종의 감염병이 신고되었고, 24종은 신고 건이 없었다. 2023년 신고된 전수감시감염병은 5,626,627건(인구 10만 명당 10,951명)으로, 2022년 28,517,180건(인구 10만 명당 55,331명) 신고건 대비 크게 감소하였으나, 코로나19(5,517,540건)를 제외하면, 신고 건은 109,087건(인구 10만 명당 212명)으로 전년(92,831건) 대비 17.5% 증가하였다(그림 1). 전년에 비해 수두(45.4%), 카바페넴내성장내세균목(carbapenem-resistant *Enterobacterales*, CRE) 감염증(25.7%), 유행성이하선염(21.7%), 말라리아(77.9%) 등 신고 건수가 증가하였으며, 코로나19(△80.6%), C형간염(△12.7%), 결핵(△3.8%), 췌장무시증(△9.2%), A형간염(△29.9%) 등이 감소하였다(표 1).



		2019년	2020년	2021년	2022년	2023년
제1급 감염병		1	60,723	569,943	0	1
제2급 감염병		164,879	86,768	80,612	28,499,981	5,610,190
제3급 감염병		17,690	19,220	18,794	17,499	16,436
합계		182,570 (△6.7%)	166,711 (△8.7%)	669,349 (301.5%)	28,517,180 (4,160.4%)	5,626,627 (△80.3%)
(코로나19 제외 시)		182,570 (△6.7%)	105,989 (△41.9%)	99,406 (△6.2%)	92,831 (△6.6%)	109,087 (17.5%)
2급	결핵	23,821	19,933	18,335	16,264	15,640
	수두	82,868	31,430	20,929	18,547	26,964
	A형간염	17,598	3,989	6,583	1,890	1,324
	유행성이하선염	15,967	9,922	9,708	6,358	7,737
	성홍열	7,562	2,300	678	505	815
	CRE감염증	15,369	18,113	23,311	30,548	38,405
1급 → 2급	코로나19	-	60,722	569,943	28,424,349	5,517,540
3급	C형간염	9,810	11,850	10,116	8,308	7,249
	쯔쯔가무시증	4,005	4,479	5,915	6,235	5,663
	후천성면역결핍증	1,006	816	771	825	749

진)하였고 수두(2022년 18,547건 → 2023년 26,964건), 유행성이하선염(2022년 6,358건 → 2023년 7,737건), 성홍열(2022년 505건 → 2023년 815건), 백일해(2022년 31건 → 2023년 292건) 등 호흡기감염병에서 주로 증가하였다. 수두는 미취학아동 및 초등학교 저학년 연령대에서 주로 발생하였고, 유행성이하선염과 백일해 또한 주로 12세 이하 어린이



에서 발생하였다. 홍역은 2021년과 2022년 환자가 발생하지 않았으나, 2023년 8명의 환자가 보고되었고 이는 해외여행 증가에 따른 국내 유입으로 지역사회 등에서 산발적으로 발생하였다. 의료관련감염증인 CRE 감염증은 60대 이상이 전체 발생 수 대비 83.8%를 차지하였다.

전년 대비 감소한 주요 감염병으로는, 코로나19가 크게 감소(2022년 28,424,349건 → 2023년 5,517,540건)하였는데, 2023년 8월 31일 법정감염병 급수 변화에 따른 감시체계 변화로 4급 감염병으로 전환되면서 이후 전수감시감염병 신고 환자 수에 포함되지 않았기 때문이다. 결핵은 2011년 신규 환자 수 39,557건으로 최고치를 기록한 이후 지속적으로 감소(2022년 16,264건 → 2023년 15,640건)하였다. A형간염은 2022년 1,890건에서 2023년 1,324건으로 감소하였다.

제3급 감염병은 전년 대비 6.1% 감소(2022년 17,499건 → 2023년 16,436건)하였다. 전년 대비 C형간염 발생 감소(2022년 8,308건 → 2023년 7,249건)가 두드러졌으며 50대 이상이 C형간염 발생의 86.1%를 차지하였다. 췌장암 시증은 2022년 6,235건에서 2023년 5,663건으로 감소하였으며, 여성(60.6%)이 남성(39.4%)보다 많았고 연령별로는 85.9%가 50대 이상이었다. 전년 대비 증가한 주요 감염병으로는 말라리아(2022년 420건 → 2023년 747건), 뎅기열(2022년 103건 → 2023년 206건) 등 매개체 감염병의 발생이 증가하였다. 말라리아는 지역별로 경기(434건), 인천(126건), 서울(94건) 순으로 많이 발생하였다. 뎅기열은 모두 해외 유입 사례로, 주요 유입 국가로는 베트남, 필리핀, 태국 등이

있었다.

### 3. 해외 유입 현황

해외 유입 감염병은 지속적으로 증가하여 2010년 이후 매년 400~700명 내외로 신고되고 있었으나, 2020년 이후 코로나19의 전 세계적 유행에 따라 2020년 5,495명(전년 대비 630.7%), 2021년 11,992명(118.2%), 2022년 56,037명(367.4%)으로 대폭 증가하는 추세를 보이다 2023년 국내외 방역 상황이 안정화되고 코로나19가 제4급 감염병으로 조정되며 7,122명(87.3%)으로 감소하였다. 코로나19(6,733건)를 제외하면 전년 대비 113.7% 증가하였으며(2022년 182건 → 2023년 389건), 모기를 매개로 감염되는 뎅기열(206건), 말라리아(74건)의 순으로 많이 발생하였다. 주요 유입 지역은 아시아 지역(중국, 일본, 베트남, 태국, 필리핀 등)이 전체의 약 76.4%를 차지하였다(표 2).

### 4. 사망 신고 현황

법정감염병으로 인한 사망은 결핵 제외 2023년 4,624건으로 전년(2022년 27,141건) 대비 83.0% 감소하였으며, 코로나19로 인한 사망 3,577건을 제외한 사망 신고 수는 1,047건으로 전년(2022년 872건) 대비 20.1% 증가하였다. 2023년에 가장 많은 사망자가 발생한 주요 감염병은 코로나19(3,577건, 77.4%) 외에 CRE 감염증(663건, 14.3%), 후천성면역결핍증(158건, 3.4%), 폐렴구균 감염증(80건, 1.7%), 중증열성혈소판감소증후군(38건, 0.8%) 등이 있다(표 3).

표 2. 2019~2023년 해외 유입 감염병 유입 대륙 현황

	2019년	2020년	2021년	2022년	2023년
아시아	647 (86.0)	1,835 (33.4)	5,724 (47.7)	30,130 (53.8)	5,444 (76.4)
아메리카	10 (1.3)	1,653 (30.1)	2,527 (21.1)	10,736 (19.2)	499 (7.0)
유럽	19 (2.5)	1,432 (26.1)	2,210 (18.4)	11,303 (20.2)	842 (11.8)
이외 대륙	76 (10.1)	575 (10.5)	1,528 (12.7)	3,868 (6.9)	337 (4.7)
합계	752 (100.0)	5,495 (100.0)	11,989 (100.0)	56,037 (100.0)	7,122 (100.0)
전년 대비 증감	(25.3)	(630.7)	(118.2)	(367.4)	(△87.3)

단위: 건(%). △=감소.

표 3. 2019-2023년 법정감염병 사망 현황

	2019년	2020년	2021년	2022년	2023년
제1급 감염병	0	884	4,875	0	0
제2급 감염병	1,902	1,653	1,745	28,195	4,329
제3급 감염병	232	227	202	268	295
합계	2,134	2,764	6,822	28,463	4,624 <sup>a)</sup>
전년 대비 증감	(△8.0)	(29.5)	(146.8)	(317.2)	(△83.8 <sup>a)</sup> )
(코로나19 제외 시)	2,134	1,880	1,947	2,194	1,047 <sup>a)</sup>
전년 대비 증감	(△8.0)	(△11.9)	(3.6)	(12.7)	(△83.8 <sup>a)</sup> )

단위: 건(%). △=감소. <sup>a)</sup>2023년 결핵 사망자 수 불포함.

## 논 의

2023년 전수감시 법정감염병 신고환자 수는 코로나19 신고건 제외 시 109,087건으로, 이는 전년(92,831건) 대비 17.5% 증가하였다. 지난 2020년부터 2022년까지 발생 건수가 감소한 것과 다르게 증가 추세를 보였고, 이러한 결과는 이전 코로나19 대응을 위한 강력한 감염병 전파 차단 조치를 시행하다가 2023년 감염병 위기단계가 하향되면서 활동과 대면 접촉이 활발해진 것이 호흡기감염병 증가에 영향을 미쳤을 것으로 볼 수 있다.

또한 2023년 해외 유입 감염병은 7,122명이 신고되어 전년(56,037명) 대비 87.3% 감소하였다. 특히, 코로나19가 크게 감소(2022년 55,855명 → 2023년 6,733명)하였고 모기를 매개로 감염되는 뎅기열(206명), 말라리아(74명)가 증가하였는데, 이는 코로나19 유행이 안정화되고, 해외여행이 늘어남에 따라 증가한 것으로 보인다.

외국에서도 전염병, 특히 백일해, 홍역이 코로나19 팬데믹 기간에 비해 크게 증가한 것으로 나타났다. 2022년 이후 2024년까지의 통계를 살펴본 결과, 기존 백신으로 예방할 수 있는 백일해, 홍역과 같은 감염병뿐만 아니라 인플루엔자처럼 매년 새로운 백신을 맞아야 예방 가능한 감염병, 모기 등 매개체를 통한 감염병 등이 증가한 것으로 나타났고[5], 우리나라에서 특히 수두, 유행성이하선염, 성홍열 등과 같은 호흡기감염병과 말라리아, 뎅기열과 같은 모기 매개 감염병 발생 건수

가 증가하였다는 것에서 유사성을 확인할 수 있다.

지난 5월 1일 코로나19 재난 위기단계가 제일 낮은 '관심' 수준으로 하향되었지만, 신종감염병 외 감염병 예방에 가장 기본적이고 효과적인 방법인 기침 예절과 올바른 손 씻기의 생활화로 일상에서 감염병을 예방하는 것이 매우 중요할 것으로 판단된다.

## Declarations

**Ethics Statement:** Not applicable.

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**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Author Contributions:** Investigation, Visualization: NRP. Supervision: YMK, JH. Writing – original draft: MJK, NRP. Writing – review & editing: MJK, YMK, JH.

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# Status of Notifiable Infectious Diseases Reporting in 2023

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## ABSTRACT

On June 28, 2024, the Korea Disease Control and Prevention Agency released the 2023 Annual Report on Notified Infectious Diseases, which summarizes the status of notifiable infectious diseases reported in 2023. Class 1 to Class 4 notifiable infectious diseases were categorized into 89 types according to the Infectious Disease Prevention and Management Act and the Notification by the Korea Disease Control and Prevention Agency. In 2023, 42 of the 66 infectious diseases subject to total monitoring were reported. Furthermore, the number of reported cases involving mandatory surveillance of infectious diseases was 5,626,627, a significant decrease from 28,517,180 in 2022. However, excluding coronavirus disease 2019 (hereinafter referred to as COVID-19), there were 109,087 cases involving mandatory surveillance, an increase of 17.5% from 92,831 in 2022. The major infectious diseases with year-on-year increases were chickenpox, infection with carbapenem-resistant *Enterobacterales*, mumps, and malaria, and the major infectious diseases that decreased were tuberculosis, hepatitis A and C, scrub typhus, and acquired immune deficiency syndrome (hereinafter referred to as AIDS). The number of cases of imported infectious diseases reported in 2023 was 7,122, a decrease of 87.3% from 2022 but an increase of 113.7% on exclusion of COVID-19. The leading imported infectious diseases were COVID-19, dengue fever, and malaria. The number of deaths reported in 2023, excluding those from tuberculosis, was 4,624, a decrease of 83.0% from 2022 but an increase of 20.1% on exclusion of COVID-19. The leading infectious diseases that caused deaths included COVID-19 and infection with carbapenem-resistant *Enterobacterales*.

**Key words:** Disease notification; Public health; Korea Disease Control and Prevention Agency

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## Introduction

The Korea Disease Control and Prevention Agency (KDCA) publishes its statistics based on the nationally approved statistics contained in the “Report of Legal Communicable Disease Outbreaks,” and has published an annual report since 2001. The most recent report, the “Yearbook of Infectious Disease

Reporting Status for 2023,” was released on June 28, 2024 [1,2]. It lists 89 types of legal communicable diseases, ranging from Class 1 to Class 4, which are defined based on the “Infectious Disease Control and Prevention Act” and the “Notification of Types of Infectious Diseases Designated by the Commissioner of the KDCA.” A total of 66 infectious diseases are subject to mandatory surveillance, ranging from Class 1 to

## Key messages

### ① What is known previously?

The coronavirus disease 2019 (COVID-19) pandemic, which lasted from 2020 to 2022, led to increased measures for the prevention of infectious disease spread. The crisis level was lowered in 2023 owing to changes in the COVID-19 pandemic.

### ② What new information is presented?

In 2023, there were 5,626,627 reports of notifiable infectious diseases, a significant decrease from 28,517,180 in 2022. However, on excluding COVID-19 (5,517,540), the number of reported cases of notifiable infectious diseases was 109,087 notifiable diseases, an increase of 17.5% from the previous year (92,831).

### ③ What are implications?

Although the COVID-19 pandemic has stabilized, it is considered important to maintain preventive measures, such as handwashing and cough etiquette, against infectious diseases.

3, while 23 infectious diseases are subject to sentinel surveillance, ranging from Classes 4 to 6. The data on the infectious diseases reported for mandatory surveillance and sentinel surveillance during the year are confirmed and refined, with the statistics published in the press release and in the “Yearbook of Reported Infectious Diseases.”

This report aims to provide basic data for the prevention and management of infectious diseases in the future by excerpting parts of the “Yearbook of Reported Infectious Diseases in 2023,” presenting the status of legal infectious diseases that occurred in 2023 and the trend of infectious disease outbreaks during the coronavirus disease 2019 (COVID-19) pandemic and after stabilization [3].

## Methods

The continuous and systematic process of collecting, analyzing, and interpreting data on infectious disease outbreaks and their vectors, followed by timely communication of the results to those who need them for use in infectious disease prevention and control, is called “infectious disease surveillance” [4]. There are a total of 89 types of legal communicable diseases, ranging from Classes 1 to 4, based on the “Infectious Disease Control and Prevention Act” and the “Notification of Types of Infectious Diseases Designated by the Commissioner of the KDCA,” and the data on outbreaks are based on diagnoses and reports from healthcare organizations.

There are three main methods of surveillance for legal communicable diseases: mandatory surveillance, which requires all healthcare organizations to report; sentinel surveillance, which targets sentinel organizations to monitor diseases with large outbreaks or requiring rapid detection of outbreaks; and complementary sentinel surveillance, which is a complementary surveillance system for predicting and managing outbreaks of non-legal communicable diseases.

Mandatory surveillance involves reporting to the relevant public health center when all doctors and other persons obligated to report infectious diseases of Classes 1 to 3 are diagnosed in accordance with Article 11 of the Infectious Disease Control and Prevention Act. In the event of an outbreak or epidemic, Class 1 infectious diseases must be reported immediately, and Class 2 and 3 infectious diseases must be reported within 24 hours. Sentinel surveillance involves receiving reports only from the designated sample monitoring organization for each infectious disease when a diagnosis of Class 4 infectious disease is made in accordance with Article 11 (5) of

the Infectious Disease Prevention Act. Sentinel organizations are required to report infectious diseases within seven days of confirmation and are operated according to the criteria for designating a sentinel organization for each infectious disease.

This report presents the main findings of an analysis of the report status, classification status, overseas inflow status, and death report status of all legal communicable diseases for mandatory surveillance in 2023 using descriptive statistics.

## Results

### 1. Status of Reported Legal Communicable Diseases

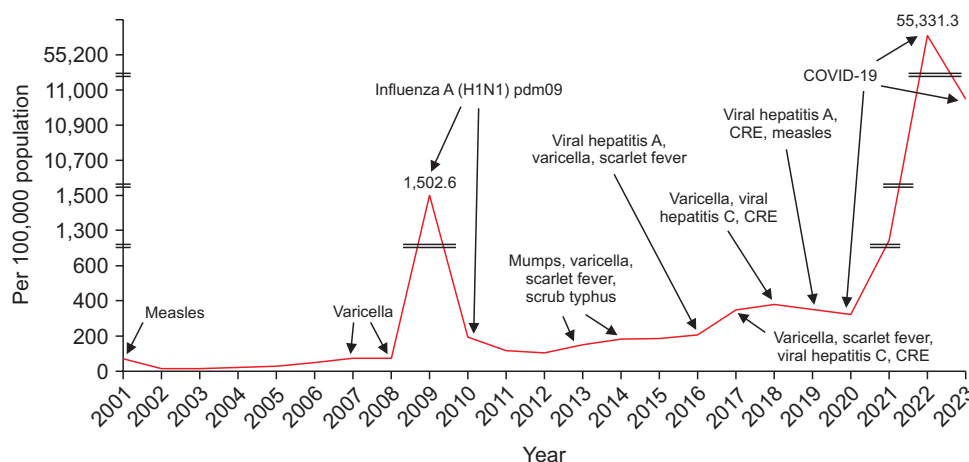
In 2023, 42 of the 66 infectious diseases under mandatory surveillance were reported, and 24 were not reported by integrated disease health management system. In 2023, 5,626,627 cases of infectious diseases were reported under mandatory surveillance (10,951 per 100,000 population), representing a significant decrease from the 28,517,180 (55,331 per 100,000 population) reported in 2022. Excluding the data related to COVID-19 (5,517,540), there were 109,087 cases (212 per 100,000 population), representing a 17.5% increase from the previous year (92,831) (Figure 1). Compared to the preceding

year, there was an increase in the incidence of chickenpox (45.4%), carbapenem-resistant *Enterobacteriaceae* (CRE) infections (25.7%), mumps (21.7%), and malaria (77.9%). In contrast, there were decreases in the incidence of several other infectious diseases, including COVID-19 ( $\Delta$ 80.6%), hepatitis C ( $\Delta$ 12.7%), tuberculosis ( $\Delta$ 3.8%), tsutsugamushi ( $\Delta$ 9.2%), and hepatitis A ( $\Delta$ 29.9%) (Table 1).

### 2. Status of Reported Legal Communicable Diseases by Class

A single case of botulism was identified, and no additional cases of Class 1 infectious diseases were reported.

Excluding COVID-19, secondary infectious diseases increased by 23.0% year-over-year (75,332 in 2022  $\rightarrow$  92,650 in 2023), with the largest increases in CRE infections (30,548 in 2022  $\rightarrow$  38,405 in 2023), followed by chickenpox (18,547 in 2022  $\rightarrow$  26,964 in 2023), mumps (6,358 in 2022  $\rightarrow$  7,737 in 2023), scarlet fever (505 in 2022  $\rightarrow$  815 in 2023), and pertussis (31 in 2022  $\rightarrow$  292 in 2023), primarily among respiratory infectious diseases. The incidence of chickenpox was highest among children in preschool and lower elementary school age groups, while mumps and pertussis were the most prevalent among children aged 12 or younger. There were no



**Figure 1.** The report of national notifiable diseases by year  
CRE=carbapenem-resistant *Enterobacteriales*; COVID-19=coronavirus disease 2019. Reused from the report of Korea Disease Control and Prevention Agency [2].

**Table 1.** 2019–2023 status of mandatory surveillance notifiable infectious disease occurrence

	2019	2020	2021	2022	2023
Class 1	1	60,723	569,943	0	1
Class 2	164,879	86,768	80,612	28,499,981	5,610,190
Class 3	17,690	19,220	18,794	17,499	16,436
Total	182,570 (Δ6.7)	166,711 (Δ8.7)	669,349 (301.5)	28,517,180 (4,160.4)	5,626,627 (Δ80.3)
(Total of excluded COVID-19)	182,570 (Δ6.7)	105,989 (Δ41.9)	99,406 (Δ6.2)	92,831 (Δ6.6)	109,087 (17.5)
Class 2    Tuberculosis	23,821	19,933	18,335	16,264	15,640
Varicella	82,868	31,430	20,929	18,547	26,964
Viral hepatitis A	17,598	3,989	6,583	1,890	1,324
Mumps	15,967	9,922	9,708	6,358	7,737
Scarlet fever	7,562	2,300	678	505	815
CRE infection	15,369	18,113	23,311	30,548	38,405
Class 1 → 2    COVID-19	-	60,722	569,943	28,424,349	5,517,540
Class 3    Viral hepatitis C	9,810	11,850	10,116	8,308	7,249
Scrub typhus	4,005	4,479	5,915	6,235	5,663
AIDS	1,006	816	771	825	749

Unit: n (Year-on-year rate, %). COVID-19=coronavirus disease 2019; CRE=carbapenem-resistant *Enterobacterales*; AIDS=acquired immunodeficiency syndrome; Δ=decrease; -=not subject to reporting. Emerging infectious disease syndrom of 2020, 2021 is COVID-19. COVID-19 adjusted to Class 2 infectious disease from 2022, and Class 4 infectious disease from August 31, 2023. The infectious diseases at the bottom are the 10 most reported infectious diseases in 2023.

measles cases in 2021 and 2022, but there were eight measles cases in 2023, with sporadic outbreaks in the community due to domestic importation from increased international travel. A total of 83.8% of all cases of healthcare-associated CRE infections occurred among individuals aged 60 or older.

Among the major infectious diseases that exhibited a decline year-over-year, the incidence of COVID-19 decreased markedly (28,424,349 in 2022 → 5,517,540 in 2023). Following the declaration of COVID-19 as a Class 4 infectious disease on August 31, 2023, because of a modification to the surveillance system, the virus was not incorporated into the aggregate tally of infectious diseases documented under mandatory surveillance. The incidence of tuberculosis has demonstrated a continued decline (16,264 in 2022 → 15,640 in 2023) since peaking in 2011, with 39,557 new cases reported.

The number of hepatitis A cases decreased from 1,890 in 2022 to 1,324 in 2023.

There was a 6.1% year-over-year decrease in Class 3 infectious diseases (17,499 in 2022 → 16,436 in 2023) and a marked year-over-year decrease in hepatitis C cases (8,308 in 2022 → 7,249 in 2023), with those aged 50 or older accounting for 86.1% of hepatitis C cases. The number of tsutsugamushi cases decreased from 6,235 in 2022 to 5,663 in 2023, with women (60.6%) outnumbering men (39.4%), and 85.9% of cases involved persons aged 50 and older. Major infectious diseases that increased year-over-year included vector-borne diseases such as malaria (420 cases in 2022 → 747 cases in 2023) and dengue (103 cases in 2022 → 206 cases in 2023). By region, malaria was most prevalent in Gyeonggi (434 cases), followed by Incheon (126) and Seoul (94). All of the

dengue cases were imported, with Vietnam, the Philippines, and Thailand as the main source countries.

### 3. International Inflow Status

The number of imported infectious diseases has been on a steady rise, with around 400 to 700 cases reported annually since 2010. Following the global pandemic of 2020, the number of cases increased significantly to 5,495 (630.7% year-over-year) in 2020, 11,992 (118.2%) in 2021, and 56,037 (367.4%) in 2022, before decreasing to 7,122 (−87.3%) in 2023, when the domestic and international epidemic situation stabilized and the classification of the disease was adjusted to a Class 4 infectious disease. Excluding COVID-19 (6,733), there was a 113.7% year-over-year increase (182 in 2022 → 389 in 2023), mainly due to mosquito-borne dengue (206) and malaria (74). The primary source region was Asia (China, Japan,

Vietnam, Thailand, the Philippines, etc.), which collectively accounted for approximately 76.4% of the total (Table 2).

### 4. Death Report Status

Deaths from legal infectious diseases, excluding tuberculosis, totaled 4,624 in 2023, representing a decrease of 83.0% year-over-year (27,141 in 2022), while deaths from COVID-19 totaled 1,047, representing an increase of 20.1% year-over-year (872 in 2022). In addition to COVID-19 (3,577 cases, 77.4%), the leading infectious diseases that caused the most deaths in 2023 included CRE infections (663 cases, 14.3%), acquired immunodeficiency syndrome (158 cases, 3.4%), pneumococcal disease (80 cases, 1.7%), and severe fever with thrombocytopenia syndrome (38 cases, 0.8%) (Table 3).

**Table 2.** 2019–2023 status of continent of imported cases

	2019	2020	2021	2022	2023
Asia	647 (86.0)	1,835 (33.4)	5,724 (47.7)	30,130 (53.8)	5,444 (76.4)
America	10 (1.3)	1,653 (30.1)	2,527 (21.1)	10,736 (19.2)	499 (7.0)
Europe	19 (2.5)	1,432 (26.1)	2,210 (18.4)	11,303 (20.2)	842 (11.8)
Others	76 (10.1)	575 (10.5)	1,528 (12.7)	3,868 (6.9)	337 (4.7)
Total	752 (100.0)	5,495 (100.0)	11,989 (100.0)	56,037 (100.0)	7,122 (100.0)
compared to the previous year	(25.3)	(630.7)	(118.2)	(367.4)	(Δ87.3)

Unit: n (%). Δ=decrease.

**Table 3.** 2019–2023 status of notifiable infectious disease death

	2019	2020	2021	2022	2023
Class 1	0	884	4,875	0	0
Class 2	1,902	1,653	1,745	28,195	4,329
Class 3	232	227	202	268	295
Total	2,134	2,764	6,822	28,463	4,624 <sup>a)</sup>
compared to the previous year	(Δ8.0)	(29.5)	(146.8)	(317.2)	(Δ83.8 <sup>a)</sup> )
(Total of excluded COVID-19)	2,134	1,880	1,947	2,194	1,047 <sup>a)</sup>
compared to the previous year	(Δ8.0)	(Δ11.9)	(3.6)	(12.7)	(Δ83.8 <sup>a)</sup> )

Unit: n (%). Δ=decrease. <sup>a)</sup>Excluded the number of tuberculosis deaths.



## Discussion

In addition to COVID-19 (3,577, 77.4%), the leading infectious diseases that caused the most deaths in 2023 included carbapenem-resistant *Enterobacteriaceae* infections (663, 14.3%), acquired immunodeficiency syndrome (158, 3.4%), pneumococcal infections (80, 1.7%), and severe febrile thrombocytopenia (38, 0.8%). This is in contrast to the observed decline in the number of cases from 2020 to 2022. These findings suggest that the increase in respiratory infections may have been driven by increased activity and in-person interactions following the downgrading of the infectious disease crisis level in 2023, after strong measures were implemented to prevent the spread of infectious diseases in response to COVID-19.

Furthermore, in 2023, 7,122 infectious diseases imported from abroad were reported, representing a decline of 87.3% from the previous year (56,037). Notably, there was a substantial decline in the incidence of COVID-19 (55,855 in 2022 → 6,733 in 2023) and an increase in mosquito-borne dengue (206) and malaria (74), likely due to the stabilization of the COVID-19 pandemic and increased international travel.

There has also been a notable surge in infectious diseases in foreign countries, particularly pertussis and measles, compared to during the COVID-19 pandemic. A review of statistics from 2022 to 2024 reveals an increase in infectious diseases such as pertussis and measles, which existing vaccines can prevent, as well as infectious diseases that require a new vaccine every year, such as influenza, and infectious diseases transmitted by vectors such as mosquitoes [5]. In the Republic of Korea, a similar pattern can be observed in the increased number of respiratory infectious diseases such as chickenpox, mumps, and scarlet fever, and mosquito-borne infectious diseases such as malaria

and dengue.

Although the COVID-19 disaster crisis level was downgraded to the lowest level of “concern” on May 1, it remains vital to prevent infectious diseases in everyday life by practicing cough etiquette and proper handwashing, which are the most basic and effective methods for preventing infectious diseases other than novel infectious diseases.

## Declarations

**Ethics Statement:** Not applicable.

**Funding Source:** None.

**Acknowledgments:** None.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Author Contributions:** Investigation, Visualization: NRP. Supervision: YMK, JH. Writing – original draft: MJK, NRP. Writing – review & editing: MJK, YMK, JH.

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## 제5차 국민건강증진종합계획 영양부문 성과지표 현황

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## 초 록

이 연구에서는 제5차 국민건강증진종합계획(5th Health Plan 2030, HP2030) 중점과제 중 영양부문의 성과지표를 중심으로 2022년 기준 목표 대비 달성도를 평가하였다. 분석자료는 국민건강영양조사 제7기 3차년도(2018)~제9기 1차년도(2022) 영양조사 자료를 활용하였다. 2022년을 기준으로 HP2030의 목표를 달성한 영양지표는 총 9개 지표 중 대표지표인 식품안전성 확보 분율, 가공식품의 영양표시 이용률 2개였으며, 나트륨 적정 섭취와 비타민 A 적정 섭취, 2개 지표는 목표치 달성은 못 했지만 개선된 것으로 나타났다. 반면 포화지방산, 과일/채소, 칼슘 적정 섭취, 건강식생활실천율, 영양섭취부족 노인 인구 비율, 5개 지표는 악화된 것으로 나타났다. 영양부문 형평성 지표 9개 중 목표를 달성한 지표는 대표지표인 식품안전성 확보 분율과 과일/채소 적정 섭취의 소득 간 격차 2개였고, 포화지방산, 나트륨 적정 섭취의 소득 간 격차 지표 2개는 개선, 건강식생활실천율 소득 간 격차는 유지, 그 외 4개 형평성 지표는 악화된 경향을 보였다. HP2030의 목표 달성을 위해서는 지표별로 취약한 집단에 대해 지속적으로 파악하고 효율적이고 구체적인 개선 방안 마련이 필요할 것으로 보인다.

**주요 검색어:** 국민건강영양조사; 제5차 국민건강증진종합계획; 식생활; 영양

## 서 론

국민건강증진종합계획은 국민의 건강증진과 질병 예방을 위한 정책 방향을 제시하는 국가 차원의 중장기 종합계획으로 보건복지부에서는 10년 단위로 계획을 수립하고 5년 단위로 지표를 보완하고 있다[1]. 보건복지부에서는 제5차 국민건강증진종합계획을 2021년 제정하여 현재 추진 중이며 현재 5년이 되는 시점으로 보완계획을 마련하고 있다. 제5차 국민건강증진종합계획(5th Health Plan 2030, HP2030)은 제4차 국민

건강증진종합계획(4th Health Plan 2020, HP2020)과 유사하게 ‘모든 사람이 평생 건강을 누리는 사회’를 비전으로 ‘건강수명 연장, 건강형평성 제고’를 총괄 목표로 두고 있다. 단, 분과 구성을 우선적으로 달성해야 하는 정책 목표를 중심으로 변화를 주었다. HP2020은 건강생활실천 확산, 만성퇴행성질환과 발생위험요인관리, 감염질환관리, 인구집단건강관리, 안전환경보전, 사업체계관리, 총 6개 분과로 구성되었다면, HP2030은 건강생활실천, 정신건강관리, 비감염성 질환 예방관리, 감염 및 기후변화성 질환 예방관리, 인구집단별 건강관리, 건강

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KDCA  
Korea Disease Control and Prevention Agency

## 핵심요약

### ① 이전에 알려진 내용은?

제5차 국민건강증진종합계획(5th Health Plan 2030, HP2030)은 2021년 제정되어 추진 중이다.

### ② 새로이 알게 된 내용은?

2022년을 기준으로 목표를 달성한 영양지표는 총 9개 지표 중 2개였으며, 2개 지표는 개선, 5개 지표는 악화되었다. 형평성 지표 9개 중 목표를 달성한 지표는 2개였고, 2개는 개선, 1개는 유지, 그 외 4개 형평성 지표는 악화되었다.

### ③ 시사점은?

HP2030의 목표 달성을 위해서는 지표별로 취약한 집단에 대해 지속적으로 파악하고 좀 더 효율적이고 구체적인 개선 방안 마련이 필요할 것으로 보인다.

친화적 환경구축, 총 6개 분과로 구성되어 있다. 각 분과는 금연, 절주, 영양 등 우선적으로 추진해야 하는 총 28개 중점과제로 구성되어 있으며 중점과제 중 영양부문은 대표지표인 식품안전성 확보 가구 분율과 형평성 지표 식품안전성 확보 가구 분율 소득 간 격차를 포함, 20개 성과지표로 구성되어 있다.

이 연구에서는 HP2030의 중점과제 영양부문 지표를 중심으로 기준치인 2018년부터 2022년까지 5년간의 추이 및 2022년 기준 HP2030 목표 대비 달성도를 평가하였다.

## 방 법

### 1. 연구 대상

이 연구에서는 HP2030 영양부문 성과지표의 최근 5년간 추이 및 2022년 기준 목표치 대비 달성도 분석을 위해 국민건강영양조사 제7기 3차년도(2018)~제9기 1차년도(2022) 영양조사 자료를 활용하였다. 분석 대상은 영양조사에 참여한 만 1세 이상이며 2018년 7,064명(남자 3,144명, 여자 3,920명), 2019년 7,147명(3,202명, 여자 3,945명), 2020

년 5,808명(남자 2,612명, 여자 3,196명), 2021년 5,940명(남자 2,639명, 여자 3,301명), 2022년 5,830명(남자 2,605명, 여자 3,225명)이었다.

### 2. 연구 방법

국민건강영양조사의 영양조사는 가공식품 선택 시 영양표시 이용 여부 등 평소 식습관을 조사하는 식생활조사, 가구 내 식품안전성 확보 여부를 조사하는 식품안전성조사, 24시간 회상법을 이용하여 하루 동안 섭취한 음식의 종류와 섭취량을 조사하는 식품섭취조사(24시간 회상조사)로 구성되어 있으며, 전문조사수행팀의 대면면접을 통해 수행되고 있다. 과일, 채소 등의 식품 섭취량과 영양소 섭취량은 식품섭취조사를 기반으로 2018년은 식품성분표 제9.1개정판[2], 2019-2022년은 제10개정판[3]을 적용하여 산출하였으며, 영양소별 적정섭취분율 등 지표 산출 시 적용한 영양섭취기준은 2018-2021년은 2015 한국인 영양소 섭취기준[4], 2022년은 2020 한국인 영양소 섭취기준[5]을 활용하였다.

이 연구에서는 HP2030 영양부문 지표 중 국민건강영양조사 영양조사 자료를 활용하여 산출 가능한 18개 성과지표를 중심으로 분석하였다. HP2030 중점과제 중 영양부문은 「식품안전성을 유지한다」, 「건강식생활실천율을 증가시킨다」, 「영양서비스 접근성을 강화한다」, 총 3개의 범주로 구성되어 있으며, 대표지표는 「식품안전성을 유지한다」에 포함된 「식품안전성 확보 가구 분율」이며 형평성 지표는 「소득 1-5분위 식품안전성 확보 가구 분율 격차(소득 간 격차)」이다. 「건강식생활실천율을 증가시킨다」 범주는 포화지방산, 나트륨, 과일/채소, 칼슘, 비타민 A를 적정 수준으로 섭취하는 인구 비율(적정 섭취), 가공식품 영양표시 이용률, 건강식생활실천율과 각 지표의 소득 간 격차로 구성되어 있으며, 「영양서비스 접근성을 강화한다」에서는 「영양섭취부족 노인 인구 비율」, 「가임기 여성의 빈혈 유병률」과 각 지표의 소득 간 격차로 구성되어 있다. 이 연구에서는 가임기 여성의 빈혈 유병률 및 소득 간 격

차, 2개 지표를 제외한 18개 성과지표의 추이 및 현황을 분석하였으며, 2030년 목표 대비 달성 여부는 「HP2030 대표지표 분석보고서」의 기준을 적용하였다[1].

달성도(%)=[(최근치-기준치)/(목표치-기준치)]×100

- 달성: 2030년 목표치 달성 및 초과, 달성도 100% 이상
  - 개선: 목표치에 접근하는 지표(기준치에서 개선된 지표), 달성도 10% 이상-100% 미만
  - 유지: 목표치에 접근하나 변화 정도가 적은 지표, 달성도 0% 이상-10% 미만이며 변화율이 적은 지표
  - 악화: 기준치에서 악화되는 지표(목표치에서 멀어지는 지표), 달성도 0% 미만이며 변화율이 큰 지표
- 변화율(%)=[(최근치-기준치)/(기준치)]×100

### 3. 분석 방법

본 연구의 모든 결과는 우리나라 국민을 대표할 수 있도록 가중치를 적용한 복합표본설계분석방법으로 산출하였으며, 추이는 표준화율, 성별·연령별 결과는 조율로 산출하였다. 모든 자료 분석은 SAS version 9.4 (SAS Institute Inc.)를 이용하였다.

## 결 과

HP2030 영양지표 현황 및 추이는 표 1, 2에 나타내었다. 2022년을 기준으로 목표를 달성한 영양지표는 총 9개 지표 중 대표지표인 ‘식품안정성 확보 분율’을 포함하여 2개였으며, 개선된 지표는 2개, 그 외 5개 지표는 악화된 것으로 나타

표 1. 제5차 국민건강증진종합계획 영양부문 지표 현황

영양부문 성과지표	'18년 (기준치)	'22년	'30년 (목표치)	현황 <sup>a)</sup>
식품안정성을 유지한다.				
식품안정성 확보 가구 분율	96.9	98.5	97.0	달성
소득 1-5분위 식품안정성 확보 가구 분율 격차	11.3	5.7	7.0	달성
건강식생활실천율을 증가시킨다.				
포화지방산을 적정수준으로 섭취하는 인구 비율	52.2	43.8	74.0	악화
소득 1-5분위 포화지방산 적정수준 섭취 인구 비율 격차	5.9	4.9	0.0	개선
나트륨을 적정수준으로 섭취하는 인구 비율	33.7	35.5	42.0	개선
소득 1-5분위 나트륨 적정수준 섭취 인구 비율 격차	8.8	6.6	0.2	개선
과일/채소를 1일 500 g 이상으로 섭취하는 인구 비율	26.2	22.7	41.0	악화
소득 1-5분위 과일/채소를 1일 500 g 이상 섭취 인구 비율 격차	11.5	5.7	6.0	달성
가공식품의 영양표시 이용률	28.5	36.3	31.7	달성
소득 1-5분위 가공식품 영양표시 이용률 격차	4.6	6.2	4.0	악화
건강식생활실천율(포화지방산)	44.9	43.7	50.6	악화
소득 1-5분위 건강식생활실천율 격차	0.3	0.3	4.4	유지
칼슘을 적정수준으로 섭취하는 인구 비율	16.8	14.1	21.0	악화
소득 1-5분위 칼슘 적정수준 섭취 인구 비율 격차	4.7	5.7	2.0	악화
비타민 A를 적정수준으로 섭취하는 인구 비율	11.8	14.5	24.0	개선
소득 1-5분위 비타민 A 적정수준 섭취 인구 비율 격차	0.4	4.4	0.0	악화
영양서비스 접근성을 강화한다.				
영양섭취부족 노인 인구 비율	18.5	21.5	12.0	악화
소득 1-5분위 영양섭취부족 노인 인구 비율 격차	5.4	20.2	0.0	악화

<sup>a)</sup>제5차 국민건강증진종합계획 2030 목표치 대비 달성 현황. 달성: 2030년 목표치 달성 및 초과, 달성도 100% 이상. 개선: 목표치에 접근하는 지표(기준치에서 개선된 지표), 달성도 10% 이상-100% 미만. 유지: 목표치에 접근하나 변화 정도가 적은 지표, 달성도 0% 이상-10% 미만이며 변화율이 적은 지표. 악화: 기준치에서 악화되는 지표(목표치에서 멀어지는 지표), 달성도 0% 미만.

표 2. 제5차 국민건강증진종합계획 영양부문 성과지표 추이

목표치 ( '30년)		전체					남자					여자				
		'18	'19	'20	'21	'22	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22
식품안전성 확보 가구 분율																
가구		96.9 (0.4)	96.5 (0.4)	96.3 (0.4)	96.7 (0.4)	98.5 (0.2)	-	-	-	-	-	-	-	-	-	-
소득수준(표준화) <sup>a),b)</sup>																
하위		88.5 (1.7)	87.0 (1.7)	86.6 (1.6)	89.6 (1.5)	94.1 (1.1)	-	-	-	-	-	-	-	-	-	-
상위		99.9 (0.1)	100 (0.0)	99.8 (0.1)	99.5 (0.3)	99.9 (0.1)	-	-	-	-	-	-	-	-	-	-
포화지방산을 적정수준으로 섭취하는 인구 비율																
3세 이상(표준화)	74.0	52.2 (0.9)	47.8 (0.8)	45.6 (0.8)	48.5 (0.9)	43.8 (0.9)	51.2 (1.1)	46.9 (1.2)	45.8 (1.2)	48.9 (1.1)	44.5 (1.3)	53.2 (1.3)	48.6 (1.0)	45.3 (1.0)	48.1 (1.3)	43.1 (1.2)
연령																
3-5		45.3 (3.9)	39.8 (3.6)	31.8 (4.3)	34.6 (4.5)	39.4 (4.5)	40.0 (5.4)	40.0 (4.6)	33.0 (5.2)	38.5 (6.2)	43.6 (7.2)	52.1 (5.5)	39.5 (6.0)	30.5 (6.4)	30.5 (6.2)	35.3 (5.5)
6-11		40.8 (3.0)	39.4 (2.9)	41.3 (3.1)	40.3 (3.5)	35.3 (3.1)	42.9 (4.5)	35.3 (3.4)	40.0 (3.7)	39.6 (4.1)	37.0 (3.9)	38.7 (3.4)	43.6 (4.1)	42.7 (4.6)	41.0 (4.5)	33.5 (4.0)
12-18		45.4 (2.9)	42.4 (2.5)	45.5 (3.2)	49.1 (2.7)	41.9 (3.1)	48.2 (3.9)	43.5 (3.8)	47.9 (4.2)	48.5 (3.8)	35.4 (4.2)	42.5 (4.2)	41.2 (3.5)	42.5 (4.7)	49.8 (3.7)	49.4 (4.8)
19-29		37.0 (2.2)	32.7 (2.1)	29.4 (2.3)	34.7 (2.2)	30.1 (2.1)	34.6 (3.0)	32.9 (3.0)	32.0 (3.5)	35.7 (3.0)	36.9 (3.3)	39.8 (3.2)	32.5 (2.9)	26.7 (2.8)	33.6 (3.1)	22.7 (2.6)
30-49		50.6 (1.4)	45.4 (1.6)	42.7 (1.5)	46.6 (1.5)	39.5 (1.4)	48.4 (1.8)	44.2 (2.3)	41.5 (2.1)	46.6 (1.9)	39.8 (2.0)	52.9 (1.9)	46.7 (1.8)	43.9 (1.8)	46.6 (2.1)	39.2 (2.0)
50-64		68.7 (1.4)	65.1 (1.4)	60.3 (1.6)	60.9 (1.7)	58.8 (1.5)	68.9 (2.0)	64.0 (1.9)	61.7 (2.1)	61.6 (2.5)	58.1 (2.3)	68.6 (1.8)	66.2 (1.8)	59.0 (2.1)	60.2 (1.9)	59.5 (1.9)
65-74		79.9 (1.6)	74.8 (1.8)	72.5 (2.2)	74.7 (1.9)	76.1 (1.7)	79.5 (2.4)	73.1 (2.4)	70.6 (3.3)	74.7 (2.9)	74.0 (2.5)	80.3 (2.0)	76.4 (2.4)	74.1 (2.5)	74.8 (2.3)	78.0 (1.9)
75+		86.3 (1.6)	79.1 (2.0)	80.6 (2.2)	82.4 (1.8)	76.8 (2.1)	85.4 (2.5)	79.1 (3.2)	77.8 (2.9)	81.8 (2.3)	74.0 (3.3)	86.8 (2.0)	79.1 (2.3)	82.3 (2.6)	82.7 (2.4)	79.0 (2.5)
소득수준(표준화)																
하위		57.0 (1.9)	46.2 (1.9)	47.4 (1.8)	52.2 (2.4)	45.1 (2.2)	53.6 (2.5)	46.0 (2.8)	49.0 (2.5)	52.8 (2.9)	46.7 (2.9)	60.3 (2.5)	46.2 (2.1)	45.6 (2.8)	51.4 (3.1)	43.0 (2.6)
상위		51.2 (2.0)	49.0 (1.8)	46.4 (2.3)	43.3 (1.9)	40.3 (2.2)	52.7 (2.4)	45.7 (2.5)	45.8 (2.8)	42.3 (2.8)	40.8 (2.7)	49.6 (2.6)	52.6 (2.4)	46.9 (2.7)	44.4 (2.4)	39.6 (2.8)
나트륨을 적정수준으로 섭취하는 인구비율																
1세 이상(표준화)	42.0	33.7 (0.8)	33.5 (0.7)	34.6 (1.0)	35.8 (0.9)	35.5 (0.8)	23.1 (0.9)	23.0 (0.9)	23.7 (1.1)	24.1 (1.1)	24.3 (1.0)	44.4 (1.1)	44.4 (1.0)	45.9 (1.3)	47.9 (1.3)	47.0 (1.1)
연령																
1-5		61.2 (2.9)	58.2 (3.1)	52.0 (3.8)	47.7 (4.3)	50.9 (4.2)	59.9 (3.8)	54.5 (3.7)	51.9 (4.9)	48.4 (5.5)	43.9 (6.1)	62.6 (4.3)	62.1 (4.6)	52.1 (5.8)	47.0 (6.1)	58.0 (4.5)
6-11		47.8 (3.0)	46.4 (2.6)	44.0 (3.6)	46.1 (3.3)	46.0 (2.7)	45.2 (4.1)	36.0 (3.1)	37.3 (4.1)	43.3 (4.0)	37.0 (4.0)	50.4 (3.6)	57.1 (3.3)	50.7 (5.0)	48.8 (4.8)	55.6 (3.6)
12-18		35.3 (3.0)	34.3 (2.7)	39.7 (3.3)	40.8 (3.4)	36.3 (2.8)	23.8 (3.1)	27.4 (4.0)	26.0 (3.9)	26.5 (4.2)	32.4 (4.0)	47.6 (4.5)	42.1 (3.3)	56.6 (4.5)	56.9 (4.1)	40.8 (4.7)
19-29		32.3 (2.0)	33.4 (2.1)	37.4 (2.1)	35.6 (2.6)	38.3 (2.5)	21.8 (2.7)	25.3 (2.8)	25.1 (3.0)	24.1 (3.2)	25.5 (3.0)	44.4 (3.0)	42.5 (3.1)	50.6 (2.9)	48.3 (3.4)	52.2 (3.1)



표 2. 계속 1

	목표치 (‘30년)	전체					남자					여자				
		’18	’19	’20	’21	’22	’18	’19	’20	’21	’22	’18	’19	’20	’21	’22
30~49		26.7 (1.2)	27.1 (1.2)	28.4 (1.4)	31.0 (1.4)	30.1 (1.2)	15.0 (1.5)	14.8 (1.4)	17.5 (1.6)	17.6 (1.8)	18.5 (1.6)	39.2 (1.8)	40.1 (1.7)	39.9 (2.2)	45.4 (1.9)	42.4 (1.7)
50~64		31.4 (1.4)	31.3 (1.4)	31.0 (1.5)	33.6 (1.4)	34.7 (1.5)	17.8 (1.6)	18.9 (1.9)	17.7 (1.9)	19.6 (1.7)	18.8 (1.8)	44.8 (2.0)	43.7 (2.0)	44.2 (2.0)	47.5 (1.9)	49.5 (2.1)
65~74		35.0 (2.0)	34.7 (1.8)	35.1 (2.1)	36.6 (2.0)	32.3 (1.6)	22.6 (2.4)	21.3 (2.2)	21.5 (3.0)	21.8 (2.8)	20.5 (2.3)	46.0 (2.6)	46.6 (2.3)	47.4 (2.7)	50.0 (2.5)	43.0 (2.5)
75+		34.5 (2.4)	35.3 (2.4)	36.0 (2.6)	34.6 (1.9)	32.8 (2.2)	19.4 (2.8)	22.3 (2.9)	27.5 (4.1)	20.1 (2.5)	21.1 (2.7)	43.4 (3.1)	43.0 (2.9)	41.2 (3.1)	43.3 (2.7)	42.3 (2.7)
소득수준																
하위		37.8 (1.7)	38.2 (1.9)	41.1 (2.5)	38.0 (2.2)	38.3 (1.8)	26.5 (2.3)	27.5 (2.1)	32.7 (2.9)	25.6 (2.4)	27.6 (2.3)	48.3 (2.5)	49.4 (2.6)	49.4 (3.1)	51.2 (3.1)	49.7 (2.5)
상위		29.0 (1.6)	27.5 (1.5)	32.2 (1.9)	34.7 (1.9)	31.7 (1.7)	18.8 (1.9)	16.9 (1.9)	20.5 (2.3)	23.0 (2.6)	19.2 (2.3)	39.5 (2.4)	38.4 (2.0)	44.2 (2.8)	46.6 (2.6)	44.1 (2.6)
과일/채소를 1일 500 g 이상으로 섭취하는 인구비율																
6세 이상(표준화)	41.0	26.2 (0.7)	28.1 (0.8)	26.2 (0.9)	25.5 (0.7)	22.7 (0.7)	29.7 (0.9)	31.1 (1.0)	29.1 (1.2)	27.9 (1.1)	24.6 (1.1)	22.7 (0.9)	25.0 (0.9)	23.3 (1.0)	23.0 (1.0)	20.7 (0.8)
연령																
6-11		11.1 (1.7)	13.6 (1.8)	13.5 (2.0)	13.0 (2.4)	15.8 (2.1)	12.6 (2.6)	14.8 (2.6)	13.0 (2.5)	10.6 (2.8) <sup>㉔</sup>	14.5 (2.5)	9.6 (2.2)	12.4 (2.3)	14.0 (2.7)	15.2 (3.6)	17.1 (3.2)
12-18		14.2 (1.8)	14.0 (1.9)	12.4 (2.4)	15.8 (2.4)	9.9 (1.8)	15.5 (2.6)	15.2 (2.8)	14.2 (3.2)	20.9 (3.9)	11.9 (2.5)	12.8 (3.1)	12.6 (2.4)	10.1 (2.8) <sup>㉔</sup>	10.2 (2.6) <sup>㉔</sup>	7.5 (2.7) <sup>㉔</sup>
19-29		15.4 (1.5)	16.7 (1.6)	12.3 (1.6)	12.5 (1.7)	9.3 (1.4)	18.5 (2.4)	19.9 (2.4)	16.4 (2.3)	15.0 (2.5)	11.9 (2.4)	11.9 (1.9)	13.0 (2.0)	7.9 (1.7)	9.6 (2.1)	6.5 (1.5)
30-49		28.5 (1.2)	32.0 (1.4)	30.4 (1.5)	26.2 (1.3)	22.5 (1.3)	32.7 (1.7)	36.5 (1.7)	32.7 (2.0)	28.9 (2.0)	24.1 (1.7)	24.1 (1.4)	27.2 (1.7)	27.9 (2.0)	23.3 (1.6)	20.7 (1.6)
50-64		44.0 (1.6)	45.2 (1.6)	42.2 (1.8)	44.4 (1.8)	38.6 (1.7)	47.6 (2.4)	46.0 (2.3)	45.5 (2.4)	45.3 (2.3)	39.5 (2.5)	40.5 (2.0)	44.5 (1.8)	38.8 (1.9)	43.5 (2.2)	37.8 (2.1)
65-74		42.7 (2.4)	41.7 (2.1)	42.6 (2.5)	44.2 (2.2)	48.8 (2.0)	46.7 (3.0)	44.2 (3.0)	46.8 (3.4)	46.9 (3.1)	52.9 (2.8)	39.2 (2.9)	39.4 (2.5)	38.9 (2.9)	41.7 (2.9)	45.0 (2.4)
75+		26.7 (2.1)	28.5 (2.3)	30.9 (2.3)	33.5 (2.1)	37.0 (2.2)	34.8 (3.3)	34.5 (3.4)	38.9 (3.3)	42.7 (3.1)	43.8 (3.1)	21.9 (2.5)	25.0 (2.6)	26.1 (2.8)	28.0 (2.6)	31.5 (3.0)
소득수준(표준화)																
하위		20.1 (1.2)	24.6 (1.4)	24.1 (1.8)	22.9 (1.7)	19.6 (1.5)	22.2 (1.9)	28.9 (2.1)	26.6 (2.8)	24.7 (2.5)	22.1 (2.2)	18.2 (1.5)	20.7 (1.8)	21.6 (2.1)	21.5 (2.3)	16.8 (1.8)
상위		31.6 (1.5)	32.9 (1.7)	26.4 (1.7)	29.0 (1.4)	25.2 (1.5)	37.1 (2.3)	34.8 (2.6)	27.5 (2.2)	31.9 (2.4)	25.1 (2.2)	25.9 (1.8)	31.3 (2.0)	25.3 (2.3)	26.1 (1.8)	25.4 (2.1)
가공식품의 영양표시 이용률																
6세 이상(표준화)	31.7	28.5 (0.8)	30.7 (1.0)	30.1 (0.9)	32.3 (0.9)	36.3 (0.9)	21.1 (1.0)	24.9 (1.1)	24.4 (1.0)	25.3 (1.3)	30.9 (1.1)	36.3 (1.1)	36.9 (1.2)	36.1 (1.2)	39.7 (1.1)	41.8 (1.2)
연령																
6-11		10.0 (1.8)	10.4 (1.5)	10.5 (1.6)	15.2 (3.0)	13.6 (2.1)	9.7 (2.3)	13.3 (2.3)	6.4 (1.9) <sup>㉔</sup>	11.9 (3.7) <sup>㉔</sup>	15.2 (3.0)	10.2 (2.4)	7.3 (1.7)	14.4 (3.0)	18.3 (3.9)	12.0 (2.7)
12-18		30.5 (2.7)	26.4 (2.8)	25.8 (2.6)	26.1 (2.5)	30.4 (2.7)	29.0 (3.5)	20.4 (3.2)	23.4 (3.5)	18.7 (3.0)	30.8 (4.2)	32.1 (3.8)	33.2 (4.1)	28.7 (4.0)	34.4 (4.2)	29.9 (4.0)
19-29		38.5 (2.4)	40.1 (2.3)	38.7 (2.1)	38.5 (2.3)	52.8 (2.4)	34.4 (3.2)	42.6 (3.3)	37.2 (2.9)	34.8 (3.4)	55.1 (3.4)	43.3 (3.2)	37.3 (3.1)	40.3 (3.0)	42.7 (2.9)	50.3 (3.0)

표 2. 계속 2

목표치 (‘30년)	전체					남자					여자				
	‘18	‘19	‘20	‘21	‘22	‘18	‘19	‘20	‘21	‘22	‘18	‘19	‘20	‘21	‘22
30-49	36.5 (1.2)	39.8 (1.6)	38.8 (1.6)	42.2 (1.5)	43.3 (1.5)	23.5 (1.7)	28.2 (1.9)	29.5 (1.9)	32.4 (2.3)	32.2 (1.9)	50.2 (1.8)	52.2 (1.9)	48.8 (2.2)	52.7 (2.0)	55.1 (2.1)
50-64	19.7 (1.1)	24.4 (1.2)	23.6 (1.4)	27.2 (1.3)	31.4 (1.5)	10.5 (1.3)	14.6 (1.5)	15.2 (1.7)	18.1 (1.7)	20.8 (1.9)	28.9 (1.7)	34.1 (1.8)	31.9 (2.3)	36.3 (1.8)	41.1 (2.0)
65-74	9.7 (1.1)	11.5 (1.3)	16.7 (1.5)	13.2 (1.2)	15.0 (1.4)	5.2 (1.3) <sup>d</sup>	10.4 (1.8)	14.3 (2.0)	7.0 (1.4)	10.9 (1.9)	13.8 (1.7)	12.5 (1.8)	18.9 (2.1)	18.8 (1.9)	18.7 (2.2)
75+	3.3 (0.6)	7.0 (1.3)	4.1 (1.0)	8.5 (1.4)	8.1 (1.3)	5.0 (1.2)	8.8 (2.3) <sup>d</sup>	6.9 (1.8) <sup>d</sup>	12.0 (2.4)	7.7 (1.9)	2.3 (0.6) <sup>d</sup>	6.0 (1.6) <sup>d</sup>	2.5 (0.9) <sup>d</sup>	6.4 (1.6) <sup>d</sup>	8.4 (1.8)
소득수준 하위	27.8 (1.6)	27.4 (1.8)	31.5 (2.1)	32.7 (1.9)	35.8 (2.0)	21.7 (2.2)	24.8 (2.3)	28.5 (2.5)	28.8 (2.8)	33.0 (2.6)	33.7 (2.2)	30.6 (2.2)	34.5 (2.9)	36.9 (2.4)	38.4 (2.5)
상위	32.5 (1.8)	35.9 (2.1)	31.3 (1.7)	35.5 (2.1)	42.0 (1.8)	24.8 (2.2)	30.9 (2.5)	24.0 (2.1)	27.0 (2.8)	34.9 (2.6)	40.6 (2.4)	40.8 (2.2)	39.0 (2.1)	44.4 (2.7)	48.7 (2.3)
건강식생활실천율															
6세 이상(표준화)	50.6 (0.9)	44.9 (0.8)	43.8 (1.0)	42.9 (1.0)	46.4 (0.9)	37.7 (1.3)	37.3 (1.1)	37.6 (1.4)	39.3 (1.3)	37.7 (1.3)	52.3 (1.1)	50.4 (1.1)	48.4 (1.2)	53.8 (1.4)	49.9 (1.2)
연령															
6-11	31.2 (3.1)	29.9 (2.6)	30.9 (3.2)	31.4 (3.8)	29.6 (3.4)	32.6 (4.5)	25.2 (2.8)	25.6 (3.7)	26.0 (3.7)	27.3 (4.2)	29.8 (3.9)	34.6 (4.0)	36.2 (4.8)	36.7 (5.3)	32.1 (4.2)
12-18	38.6 (2.6)	31.4 (2.5)	35.0 (3.2)	39.9 (2.8)	35.6 (2.9)	34.8 (3.8)	26.6 (3.5)	29.6 (3.8)	33.2 (3.5)	32.3 (3.9)	42.8 (4.3)	36.8 (3.1)	41.6 (4.1)	47.5 (4.2)	39.4 (4.3)
19-29	36.4 (2.4)	36.1 (2.2)	34.5 (2.3)	37.3 (2.4)	40.8 (2.4)	29.5 (3.0)	35.4 (2.9)	31.3 (3.5)	32.5 (3.0)	39.2 (3.4)	44.4 (3.2)	36.9 (3.0)	37.9 (3.4)	42.7 (3.4)	42.5 (2.9)
30-49	45.6 (1.3)	46.4 (1.4)	43.8 (1.6)	48.8 (1.6)	41.8 (1.4)	35.1 (2.0)	36.8 (1.8)	37.2 (2.1)	40.0 (2.2)	33.4 (2.0)	56.7 (1.8)	56.5 (1.7)	50.9 (1.9)	58.2 (1.9)	50.8 (2.0)
50-64	57.8 (1.7)	56.9 (1.5)	54.7 (1.6)	56.7 (1.6)	55.6 (1.6)	50.8 (2.4)	48.0 (2.1)	49.1 (2.5)	48.2 (2.2)	45.3 (2.4)	64.8 (2.0)	65.8 (1.7)	60.3 (1.8)	65.2 (1.9)	65.2 (1.9)
65-74	58.8 (2.1)	57.2 (1.9)	58.9 (2.0)	61.9 (2.1)	62.5 (1.8)	52.1 (3.4)	50.8 (2.6)	53.5 (3.5)	54.0 (3.3)	56.6 (2.5)	64.8 (2.5)	62.9 (2.5)	63.9 (2.2)	69.0 (2.1)	67.8 (2.1)
75+	53.7 (2.5)	50.5 (2.5)	54.7 (2.3)	57.2 (2.1)	55.9 (2.7)	48.1 (3.8)	48.9 (3.5)	53.8 (3.4)	55.7 (3.1)	49.7 (4.3)	57.1 (2.9)	51.5 (3.0)	55.2 (3.1)	58.2 (2.6)	60.9 (2.7)
소득수준(표준화)															
하위	45.3 (1.7)	42.4 (2.0)	46.2 (2.0)	48.6 (2.3)	44.0 (2.2)	36.1 (2.6)	39.7 (2.5)	43.1 (2.9)	41.9 (2.8)	40.2 (2.8)	53.8 (2.4)	45.5 (2.3)	49.1 (2.8)	56.0 (3.1)	47.7 (3.0)
상위	45.6 (2.2)	44.8 (1.7)	42.4 (2.3)	45.5 (1.8)	44.3 (1.7)	40.8 (2.8)	39.1 (2.4)	35.1 (3.0)	38.5 (2.8)	36.5 (2.4)	50.6 (2.6)	50.8 (2.3)	49.7 (2.7)	52.4 (2.4)	51.8 (2.7)
칼슘을 적정수준으로 섭취하는 인구비율															
1세 이상(표준화)	21.0 (0.6)	16.8 (0.5)	14.4 (0.7)	14.2 (0.7)	14.9 (0.6)	20.1 (0.9)	16.1 (0.7)	16.2 (0.9)	17.1 (1.0)	15.4 (0.9)	13.6 (0.8)	12.9 (0.7)	12.1 (0.8)	12.8 (0.9)	13.0 (0.7)
연령															
1-5	29.5 (2.9)	26.3 (2.6)	23.6 (2.9)	31.3 (3.8)	29.5 (3.9)	33.5 (3.6)	22.2 (3.1)	21.9 (4.1)	34.6 (5.3)	27.9 (4.9)	24.9 (3.4)	30.7 (3.8)	25.6 (4.4)	27.6 (5.6)	31.2 (5.1)
6-11	16.1 (2.2)	14.7 (1.9)	15.7 (2.2)	13.6 (2.2)	13.5 (1.7)	19.0 (3.3)	16.6 (2.6)	19.9 (3.4)	13.4 (2.8)	15.5 (2.5)	13.2 (2.5)	12.9 (2.3)	11.5 (2.8)	13.9 (3.3)	11.3 (2.6)

표 2. 계속 3

목표치 (‘30년)	전체					남자					여자				
	‘18	‘19	‘20	‘21	‘22	‘18	‘19	‘20	‘21	‘22	‘18	‘19	‘20	‘21	‘22
12-18	13.3 (2.1)	7.5 (1.2)	8.2 (1.9)	11.0 (2.2)	8.4 (1.9)	11.5 (2.4)	7.9 (1.8)	13.0 (3.0)	12.4 (3.1)	10.0 (2.5)	15.3 (3.7)	7.0 (1.9) <sup>a</sup>	2.3 (1.3) <sup>a)</sup>	9.5 (2.8) <sup>a</sup>	6.6 (2.5) <sup>a</sup>
19-29	16.5 (1.5)	13.6 (1.5)	12.9 (1.4)	13.8 (1.6)	11.7 (1.4)	17.7 (2.2)	14.7 (2.3)	12.4 (2.0)	14.1 (2.2)	13.4 (2.2)	15.0 (2.0)	12.4 (1.9)	13.4 (2.2)	13.5 (2.3)	9.9 (1.7)
30-49	16.6 (1.1)	14.3 (0.9)	14.1 (1.1)	12.9 (1.2)	14.6 (1.0)	19.4 (1.7)	14.9 (1.2)	15.0 (1.6)	14.2 (1.8)	13.3 (1.6)	13.6 (1.2)	13.7 (1.2)	13.1 (1.4)	11.6 (1.2)	15.9 (1.4)
50-64	17.6 (1.1)	16.8 (1.1)	15.3 (1.4)	17.1 (1.3)	14.4 (1.2)	24.4 (2.0)	21.1 (1.6)	19.2 (1.9)	21.7 (2.0)	19.0 (1.9)	10.9 (1.1)	12.4 (1.3)	11.4 (1.5)	12.5 (1.4)	10.2 (1.4)
65-74	16.0 (1.8)	14.3 (1.4)	16.3 (1.7)	19.4 (1.6)	16.9 (1.6)	23.6 (3.0)	20.9 (2.4)	21.9 (2.4)	27.0 (2.4)	22.4 (2.5)	9.1 (1.6)	8.4 (1.4)	11.2 (1.8)	12.6 (1.6)	12.0 (1.8)
75+	7.3 (1.1)	8.5 (1.4)	9.0 (1.7)	10.6 (1.3)	13.1 (1.7)	14.7 (2.5)	15.5 (2.7)	14.5 (2.8)	17.6 (2.6)	17.6 (2.2)	3.0 (1.0) <sup>a</sup>	4.4 (1.1) <sup>a</sup>	5.7 (1.6) <sup>a</sup>	6.4 (1.4)	9.5 (2.2)
소득수준(표준화)															
하위	15.0 (1.2)	13.0 (1.1)	13.7 (1.5)	13.6 (1.6)	12.2 (1.2)	17.8 (2.0)	16.1 (1.7)	15.1 (2.0)	15.3 (2.1)	12.2 (1.6)	12.4 (1.4)	10.0 (1.4)	12.5 (1.7)	12.0 (1.9)	12.4 (1.9)
상위	19.6 (1.4)	16.2 (1.3)	15.8 (1.4)	15.4 (1.4)	17.9 (1.5)	22.6 (2.1)	17.0 (1.7)	19.3 (2.1)	18.0 (1.9)	17.0 (2.3)	16.7 (2.1)	15.7 (1.7)	12.7 (1.5)	13.0 (2.0)	18.9 (2.1)
비타민 A를 적정수준으로 섭취하는 인구비율															
1세 이상(표준화)	24.0 (0.5)	11.8 (0.5)	12.9 (0.7)	14.1 (0.7)	14.5 (0.7)	11.8 (0.7)	11.9 (0.7)	10.6 (0.8)	12.4 (0.9)	13.5 (0.8)	11.7 (0.7)	13.9 (0.7)	13.8 (0.9)	15.8 (0.9)	15.5 (0.8)
연령															
1-5	24.5 (2.4)	27.4 (2.8)	26.6 (3.4)	28.7 (3.5)	53.6 (4.0)	26.7 (3.3)	23.3 (3.3)	23.8 (3.9)	31.5 (4.7)	59.0 (6.1)	22.0 (3.1)	31.8 (4.0)	29.6 (5.0)	25.6 (5.3)	48.1 (5.3)
6-11	13.8 (1.8)	19.6 (2.0)	15.8 (2.7)	25.1 (3.0)	26.6 (2.3)	10.6 (2.3)	16.1 (2.4)	15.2 (3.0)	20.2 (3.2)	25.8 (3.1)	17.0 (2.9)	23.1 (2.8)	16.5 (3.6)	29.9 (4.6)	27.5 (3.4)
12-18	9.7 (1.8)	10.4 (1.8)	7.3 (1.7)	12.9 (1.9)	6.1 (1.7) <sup>a</sup>	9.8 (2.3)	10.1 (2.2)	7.9 (2.0) <sup>a</sup>	12.8 (2.8)	7.6 (2.4) <sup>a</sup>	9.6 (2.5) <sup>a</sup>	10.8 (2.4)	6.6 (2.6) <sup>a</sup>	12.9 (2.6)	4.4 (2.0) <sup>a</sup>
19-29	10.8 (1.4)	8.8 (1.1)	8.3 (1.3)	11.1 (1.5)	7.4 (1.1)	10.1 (1.8)	8.1 (1.6)	6.8 (1.5)	10.0 (2.1)	5.1 (1.3) <sup>a</sup>	11.5 (2.0)	9.6 (1.8)	9.9 (2.0)	12.2 (2.1)	9.9 (1.8)
30-49	10.9 (0.9)	11.1 (0.8)	11.9 (1.1)	10.9 (1.0)	12.5 (0.9)	12.4 (1.4)	11.2 (1.2)	11.0 (1.4)	9.8 (1.4)	10.7 (1.3)	9.3 (1.0)	11.0 (1.1)	12.9 (1.4)	12.1 (1.3)	14.5 (1.3)
50-64	11.3 (1.1)	14.9 (1.2)	13.1 (1.1)	14.3 (1.1)	12.6 (1.1)	9.5 (1.4)	13.0 (1.5)	9.0 (1.2)	9.3 (1.2)	10.2 (1.5)	13.2 (1.4)	16.8 (1.5)	17.2 (1.7)	19.2 (1.7)	14.7 (1.6)
65-74	12.2 (1.4)	12.4 (1.3)	13.5 (1.4)	15.7 (1.4)	15.2 (1.5)	9.8 (2.0)	11.1 (1.8)	9.7 (1.8)	14.1 (2.1)	14.9 (2.1)	14.4 (1.9)	13.6 (1.6)	16.9 (1.9)	17.1 (1.8)	15.4 (1.8)
75+	5.3 (1.1)	10.0 (1.6)	10.7 (2.0)	11.8 (1.8)	11.2 (1.6)	6.5 (2.0) <sup>a</sup>	10.3 (2.3)	9.2 (2.0)	10.2 (2.3)	13.8 (2.0)	4.6 (1.0)	9.8 (1.8)	11.6 (2.4)	12.8 (2.1)	9.1 (1.8)
소득수준(표준화)															
하위	11.5 (1.2)	11.8 (1.0)	11.2 (1.2)	11.3 (1.5)	13.1 (1.3)	10.0 (1.6)	12.0 (1.6)	10.0 (1.6)	11.3 (2.1)	10.8 (1.5)	13.0 (1.5)	11.8 (1.3)	12.4 (1.7)	11.5 (1.6)	15.6 (2.1)
상위	11.9 (1.1)	15.0 (1.1)	12.6 (1.4)	16.0 (1.3)	17.5 (1.4)	13.7 (1.6)	12.7 (1.5)	10.7 (1.5)	13.3 (1.9)	16.3 (1.9)	9.6 (1.3)	17.5 (1.8)	14.6 (1.9)	18.6 (2.0)	18.5 (1.8)

표 2. 계속 4

	목표치 (‘30년)	전체					남자					여자				
		’18	’19	’20	’21	’22	’18	’19	’20	’21	’22	’18	’19	’20	’21	’22
영양섭취부족 노인 인구 비율																
75세 이상	12.0	18.5	29.4	31.4	27.3	21.5	16.1	24.7	31.5	25.7	18.0	19.9	32.1	31.3	28.2	24.4
		(1.8)	(2.1)	(2.7)	(2.1)	(1.9)	(2.7)	(3.1)	(3.5)	(2.6)	(2.5)	(2.4)	(2.6)	(3.5)	(2.7)	(2.4)
소득수준(표준화)																
하위		14.1	30.3	43.9	39.7	33.6	7.9	23.6	54.9	31.7	34.4	18.3	33.9	37.2	44.7	33.0
		(3.0)	(4.0)	(6.3)	(5.4)	(4.4)	(4.6) <sup>d)</sup>	(5.9)	(7.8)	(6.6)	(6.4)	(4.4)	(5.8)	(7.7)	(7.0)	(5.7)
상위		19.5	29.5	23.7	19.8	13.4	9.9	27.8	18.0	23.7	3.0	24.2	30.4	26.4	17.9	21.6
		(4.4)	(4.9)	(4.5)	(3.8)	(3.4) <sup>d)</sup>	(4.3) <sup>d)</sup>	(7.7) <sup>d)</sup>	(6.0) <sup>d)</sup>	(7.3) <sup>d)</sup>	(1.8) <sup>d)</sup>	(6.0)	(6.2)	(6.3)	(4.8) <sup>d)</sup>	(5.3)

단위: %. <sup>a)</sup>소득수준: 월가구균등화소득(월가구소득/√가구원수)을 성별·연령별(5세 단위) 오분위로 분류. <sup>b)</sup>2005년 추계인구로 연령표준화. <sup>c)</sup>변동계수 25~50%. <sup>d)</sup>50% 이상.

났다. 형평성 지표인 지표별 소득 간 격차의 경우 9개 지표 중 목표를 달성한 지표는 대표지표인 식품안정성 확보 분율의 소득 간 격차를 포함하여 2개였고, 2개 지표는 개선, 1개 지표는 유지, 그 외 4개 소득 간 격차 지표는 목표치에서 멀어지며 악화되는 경향을 보이고 있었다.

지표별로 최근 5년간의 추이를 상세하게 살펴보면, 영양부문의 대표지표인 「식품안정성 확보 분율」은 2022년 98.5%로 HP2030 목표치(97.0%)를 달성하였고, 「가공식품의 영양표시 이용률」 또한 2018년부터 꾸준히 증가하여 2022년 (36.3%) 목표치(31.7%)를 달성한 것으로 나타났다. 나트륨, 비타민 A 적정 섭취 두 지표는 2022년 35.5%, 14.5%로 목표치(42.2%, 24.0%)를 달성하지는 못했지만, 최근 5년간 증가 추세로 개선되는 경향이였다. 반면 포화지방산 적정 섭취는 최근 5년간 감소 추이로 2022년(43.8%) 목표치(74.0%)와 약 30%p 차이였으며, 과일/채소 적정 섭취(22.7%), 칼슘 적정 섭취(14.1%) 또한 매우 낮은 수준임에도 불구하고 지속적으로 감소 추이를 보이며 목표치(41.0%, 21.0%)와 멀어지는 경향이였다. 건강식생활실천율은 2021년 약간 증가했다가 2022년 다시 감소(43.7%)하여 목표치(50.6%)와 멀어지는 경향을 보였다. 마지막으로 영양섭취부족 노인 인구 비율은 2022년에 2018년(18.5%) 대비 3.0%p 증가하여 21.5%이었으며 목표치(12.0%) 달성을 위해서는 약 10%p 감소가 필요

한 것으로 나타났다.

영양지표 현황을 성별로 살펴보면, 포화지방산, 나트륨 적정 섭취, 가공식품 영양표시 이용률, 건강식생활실천율은 남자가 여자보다 낮은 경향이였고, 과일/채소, 칼슘 적정 섭취는 남자보다 여자에서 더 낮은 경향이였다. 비타민 A 적정 섭취는 남녀가 유사하였다. 연령별로는 포화지방산 적정 섭취는 40세 이하 연령에서 전반적으로 낮은 수준이였고, 특히 19-29세는 목표치의 절반 이하 수준으로 가장 낮았다. 과일/채소, 비타민 A 적정 섭취는 12-29세에서 가장 낮았는데 과일/채소 적정 섭취의 경우 목표치가 41.0%임에도 불구하고 10% 이하였고, 비타민 A 적정 섭취 또한 10% 이하로 목표치의 절반 수준에도 못 미치고 있었다. 칼슘 적정 섭취 또한 12-29세에서 가장 낮았고, 목표치의 절반 수준이였다. 나트륨 적정 섭취는 30-49세에서 가장 낮았고, 65세 이상의 경우 개선되는 경향을 보이는 다른 연령과 달리 목표치에서 멀어지며 악화되는 경향을 보이고 있었다. 가공식품의 영양표시 이용률은 6-11세와 65세 이상에서 가장 낮았고 특히 75세 이상의 경우 8.1%로 매우 낮았다. 건강식생활실천율은 6-18세에서 낮은 경향을 보이고 있었다.

영양부문의 형평성 지표의 경우 대표지표인 식품안정성 확보 가구 분율의 소득 간 격차는 2022년 기준 5.7%로 목표치(7.0%)를 달성하였으며, 소득수준 하위 집단이 개선되어 격

차 감소로 이어진 것으로 나타났다. 반면 과일/채소 적정 섭취의 소득 간 격차 또한 목표치를 달성한 것으로 나타났으나 적정 섭취 분율이 상대적으로 높은 소득수준 상위 집단에서 최근 5년간 크게 감소하면서 격차 감소로 이어진 것으로 나타났다. 포화지방산, 나트륨 적정 섭취의 소득 간 격차 2개 지표는 목표치를 달성하지는 못했지만 개선된 것으로 나타났다. 하지만 두 형평성 지표의 격차 감소의 이유 또한 차이가 있었는데 나트륨 적정 섭취의 경우 적정 섭취 분율이 낮은 소득수준 상위 집단의 분율이 꾸준히 증가하며 격차가 감소한 것으로 나타났지만, 포화지방산의 경우 소득수준 상, 하위 집단 모두 감소 추세이며 소득수준 하위 집단의 감소가 상대적으로 커서 격차가 감소한 것으로 나타났다. 그 외 가공식품 영양표시 이용률, 칼슘, 비타민 A 적정 섭취, 영양섭취부족 노인 인구의 형평성 지표는 목표치와 멀어지며 악화된 것으로 나타났으며 4개 형평성 지표 모두 소득수준 하위 집단이 소득수준 상위 집단보다 지표 개선 정도가 작거나 악화 정도가 커서 격차가 증가한 것으로 나타났다.

## 논 의

HP2030 영양부문 18개 지표의 2022년 기준 목표치 달성 현황을 살펴본 결과, 대표지표인 식품안정성 확보 가구 분율과 가공식품 영양표시 이용률 2개 지표는 HP2030 목표치를 달성하였고, 나트륨, 비타민 A 적정 섭취 2개 지표는 목표치 달성은 못 했지만 개선되는 경향을 보였다. 그러나 포화지방산, 과일/채소, 칼슘 적정 섭취, 건강식생활실천율, 영양부족 노인 인구 5개 지표는 감소 추세로 악화되는 경향을 보이고 있었다. 영양부문의 형평성 지표 또한 2개 지표는 달성, 2개 지표는 개선, 1개 지표는 개선, 4개 지표는 악화 경향인 것으로 확인되었다.

본 연구에서는 각 지표의 세부 집단별 지표 현황을 살펴보고 개선이 필요한 집단에 대해 파악하고자 하였다. 그 결

과, 포화지방산의 경우 19-29세, 나트륨은 30-49세, 과일/채소, 칼슘, 비타민 A는 12-29세, 가공식품 영양표시 이용률은 6-11세, 65세 이상에서 가장 낮은 것을 확인할 수 있었다. 형평성 지표에서도 취약한 집단의 지표 개선이 격차 감소로 이어진 긍정적인 현황을 보이는 지표도 확인하였지만, 칼슘, 비타민 A 적정 섭취, 영양섭취부족 노인 인구 분율과 같이 적정 섭취 분율이 상대적으로 낮은 소득수준 하위 집단에서 지표 개선 정도가 작거나 악화 정도가 커서 격차가 증가한 지표들도 확인할 수 있었다. HP2030에서는 영양부문의 중점과제 「건강한 식생활 실천 및 최적의 영양상태 유지 기반 강화」에 첫 번째 세부 계획으로 「인구집단별 맞춤형 영양관리 서비스 확대 및 접근성 강화」를 포함, 세부집단별 맞춤형 관리에 대한 내용을 강조하고 있다[6]. HP2030의 목표 달성을 위해서는 지표별로 취약한 집단에 대해 지속적으로 파악하여 구체적인 개선 방안 마련이 필요할 것으로 보인다.

현재 HP2030 제정 후 5년이 지난 시점으로 보완계획을 마련하는 것이 필요한 시점이다. 영양부문의 대표지표인 식품안정성 확보 가구 분율과 소득 간 격차는 2022년 기준으로 HP2030 목표치를 달성하였고, 가공식품 영양표시 이용률 또한 목표치를 달성하였다. 따라서 보완계획 마련 시 대표지표를 포함하여 이미 목표를 달성한 지표의 유지 여부, 목표치 조정 등에 대한 고려가 필요한 것으로 보인다. 국민건강영양조사는 현재 제10기(2025-2027) 조사에 대해 기획 중에 있으며, 조사 방법에 대한 변화가 있을 수 있다. HP2030의 보완계획 마련 시에는 국민건강영양조사를 포함하여 자료원의 조사 방법 등의 변화에 대한 고려도 필요할 것으로 보인다.

## Declarations

**Ethics Statement:** The study was approved by the Institutional Review Board of the Korea Disease Control and Prevention Agency (IRB no. 2018-01-03-P-A,

2018-01-03-C-A, 2018-01-03-2C-A, 2018-01-03-5C-A, 2018-01-03-4C-A).

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**Author Contributions:** Conceptualization: SHY, KWO. Methodology: SHY. Formal analysis: JHL. Writing – original draft: SHY. Writing – review & editing: KWO.

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# The Nutrition Indicators Status of 5th Health Plan 2030

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## ABSTRACT

This study evaluated the achievement of the Fifth Health Plan 2030 (HP2030) goals for nutrition indicators based on data from the 2018–2022 Korea National Health and Nutrition Examination Survey. As of 2022, goals were achieved for only two among the nine nutrition indicators in HP2030, namely, the “proportion of households with food security” and the “proportion of population using nutrition label on processed food”. Although targets were not met for the proportions of the population with adequate intake of sodium and vitamin A, improvements were noted in these indicators. Conversely, worsening trends were noted for five indicators, proportions of the population with an adequate saturated fat intake, fruit/vegetable intake, calcium intake, and healthy eating practices and the proportion of the elderly with inadequate nutrient intake. Regarding nutrition equity indicators, goals were achieved for the following two indicators: “Gap in proportion of households with food security in the 1st to 5th income quintiles” and “Gap in proportion of population eating 500 g or more fruit and vegetable per day in the 1st to 5th income quintiles” While two indicators related to nutrition equity, namely, the proportions of the population with adequate saturated fat and sodium intakes, showed improvement, the proportion of the population with healthy eating practices remained unchanged. However, worsening trends were noted for four nutrition equity indicators. To achieve the HP2030 goals, it is essential to continuously identify vulnerable groups and develop more effective and specific improvement measures.

**Key words:** Korea National Health and Nutrition Survey; HP2030; Dietary; Nutrition

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## Introduction

The Health Plan (HP) is a national strategy for promoting public health and preventing disease. The Ministry of Health and Welfare develops the plan every 10 years and updates the indicators every 5 years [1]. The HP was enacted by the Ministry of Health and Welfare in 2021. Currently, the Health Plan 2030 (HP2030) is being implemented, with a

supplementary plan being prepared for its fifth anniversary. Similar to HP2020, HP2030 postulates “a society where everyone enjoys life-long health”, with the overarching goal of “improve population health while promoting health equity.” However, the divisions of HP2030 have been structured of to focus on policy goals HP2020. HP2020 comprised the following six divisions: healthy lifestyle practices, chronic degenerative diseases and risk factors, infectious disease management,

## Key messages

### ① What was known previously?

The 5th Health Plan 2030 (HP2030) was established and implemented in 2021.

### ② What new information is presented?

With regard to the nine nutrition indicators, as of 2022, target achievement, worsening trends, and improvements were noted for two, five, and two indicators, respectively. Furthermore, regarding the nine nutrition equity indicators, target achievement, improvements, stable results, and worsening trends were noted for two, two, one, and four indicators, respectively.

### ③ What are the implications?

To achieve the goals of HP2030, it will be essential to continuously identify vulnerable groups for each indicator and develop more efficient and specific improvement measures.

population health management, safety and environmental health, and project system management. HP2030 comprises the following six divisions: healthy lifestyle practices, management of mental health, prevention management of non-infectious disease, preventive management of disease related to infection and climate change, management of health by population group, and development of health-friendly environment. Each domain consists of 28 topic areas, including tobacco use, alcohol use, and nutrition. The nutrition sector has 20 indicators. The proportion of households with food security is the representative indicator, and the gap in proportion of households with food security in the 1st to 5th income quintiles is an equity indicator.

This study aims to assess the progress made against the HP2030 targets for 2022 and the 5-year trend from the

baseline of 2018 to 2022, focusing on indicators in the nutrition sector.

## Methods

### 1. Subjects

This study utilized data from the 2018–2022 Korean National Health and Nutrition Examination Surveys (KNHANES) to analyze the 5-year trend of the HP2030 nutrition indicator and its achievement in 2022 against the target. The population included in the analysis comprised individuals aged 1 year and older who participated in the nutrition survey: 7,064 (3,144 men and 3,920 women participants) in 2018; 7,147 (3,202 men and 3,945 women participants) in 2019; 5,808 (2,612 men and 3,196 women participants) in 2020; 5,940 (2,639 men and 3,301 women participants) in 2021; and 5,830 (2,605 men and 3,225 women participants) in 2022.

### 2. Methods

The KNHANES nutrition survey is conducted via face-to-face interviews by the dietitian teams. It comprises the dietary behaviors survey that examines daily eating habits, such as the use of nutrition labels in selecting processed foods; the food security survey that examines food security in the household; and the 24-hour dietary recall that examines the types and amounts of food consumed during the day. Intake of foods such as fruits and vegetables and nutrient intake were calculated on the basis of the 24-hour dietary recall, applying the Ninth Revision of the Food Composition Table [2] for 2018 and the Tenth Revision [3] for 2019–2022. The nutrition indicators, such as the percentage of adequate intake for each nutrient, were calculated using the Dietary Reference Intakes for Koreans in

2015 [4] for 2018–2021 and the Dietary Reference Intakes for Koreans in 2020 [5] for 2022.

This study focused on 18 indicators from the HP2030 nutrition indicators that could be calculated using data from the nutrition survey of KNHANES. The nutrition sector of HP2030 comprises three categories: “maintaining food security,” “increasing healthy eating behaviors,” and “enhancing access to nutrition services.” The representative indicator is the “proportion of households with food security” under “maintaining food security,” and the equity indicator is the “gap in proportion of households with food security in the 1st to 5th income quintiles (income gap).” The “increasing healthy dietary practices” category consists of the proportion of the population with adequate intake of saturated fatty acid, sodium, fruits and vegetables, calcium, and vitamin A (adequate intake), the use of nutrition labels on processed foods, and the gap in healthy eating behaviors between income groups for each indicator. The “enhancing access to nutrition services” category consists of the “proportion of elderly population with inadequate nutrient intake” and “prevalence of anemia among women of reproductive age” and the income gap for each indicator. The study analyzed the trend and status of 18 performance indicators, except for two indicators: the prevalence of anemia among women of reproductive age and the income gap, and the achievement of the 2030 targets, based on the criteria set forth in the “HP2030 Representative Indicator Analysis Report” [1].

$$\text{Achievement (\%)} = \frac{(\text{Recent} - \text{Baseline})}{(\text{Target} - \text{Baseline})} \times 100$$

- Achievement: Indicators meeting or exceeding 2030 targets, with more than 100% achievement

- Improvement: Indicators approaching target (improved from baseline), with 10–100% achievement
- Maintain: Indicators approaching the target but with little change, or indicators with 0–10% achievement, showing minimal rate of change
- Worsening: Indicators deteriorating from baseline (moving away from the target), with achievement less than 0%, showing minimal rate of change

$$\text{Rate of change (\%)} = \frac{(\text{Recent} - \text{Baseline})}{(\text{Baseline})} \times 100$$

### 3. Data Analysis

All results of this study were calculated using a weighted complex sample analysis to represent the Korean population, and the results by gender and age were adjusted. The data were analyzed using SAS version 9.4 (SAS Institute Inc.).

## Results

Tables 1 and 2 present the details on the HP2030 nutrition indicators and trends. Of the nine nutrition indicators that met their targets by 2022, including the representative indicator, “proportion of households with food security”, two showed improvement and five showed worsening. For the equity indicators and the income gaps for each indicator, two of the nine indicators met their targets, including the “gap in proportion of households with food security in 1st to 5th income quintiles” as the representative indicator. Two indicators were retained, with the remaining four income gap indicators moving away from their targets, showing deterioration.

An examination of the 5-year trend for each indicator revealed that the representative indicator for the nutrition sectors, the “proportion of households with food security,” was

**Table 1.** Status of achievement in nutrition indicators of the Health Plan 2030

Nutrition indicators	'18 (Baseline)	'22	'30 (Target)	Status <sup>a)</sup>
Maintaining food safety				
Proportion of households with food security	96.9	98.5	97.0	Achievement
Gap in proportion of households with food security in the 1st to 5th income quintiles	11.3	5.7	7.0	Achievement
Increasing healthy eating practices				
Proportion of population with adequate saturated fatty acid intake	52.2	43.8	74.0	Worsening
Gap in proportion of population with adequate saturated fatty acid intake in the 1st to 5th income quintiles	5.9	4.9	0.0	Improvement
Proportion of population with adequate sodium intake	33.7	35.5	42.0	Improvement
Gap in proportion of population with adequate sodium intake in the 1st to 5th income quintiles	8.8	6.6	0.2	Improvement
Proportion of population eating 500 g or more of fruits and vegetables per day	26.2	22.7	41.0	Worsening
Gap in proportion of population eating 500 g or more of fruits and vegetables per day in the 1st to 5th income quintiles	11.5	5.7	6.0	Achievement
Proportion of population using nutrition label on processed foods	28.5	36.3	31.7	Achievement
Gap in proportion of population using nutrition label on processed foods in the 1st to 5th income quintiles	4.6	6.2	4.0	Worsening
Proportion of healthy eating practices	44.9	43.7	50.6	Worsening
Gap in proportion of healthy eating practices in the 1st to 5th income quintiles	0.3	0.3	4.4	Maintain
Proportion of population with adequate calcium intake	16.8	14.1	21.0	Worsening
Gap in proportion of population with adequate calcium intake in the 1st to 5th income quintiles	4.7	5.7	2.0	Worsening
Proportion of population with adequate vitamin A intake	11.8	14.5	24.0	Improvement
Gap in proportion of population with adequate vitamin A intake in the 1st to 5th income quintiles	0.4	4.4	0.0	Worsening
Enhancing access to nutrition services				
Proportion of elderly population with inadequate nutrient intake	18.5	21.5	12.0	Worsening
Gap in proportion of elderly population with inadequate nutrient intake in the 1st to 5th income quintiles	5.4	20.2	0.0	Worsening

<sup>a)</sup>Status of achievement in nutrition indicators of the Health Plan 2030. Achievement: achievement exceeds 100%. Improvement: achievement range from 10% to less than 100%. Maintain: achievement range from 0% or to less than 10%. Worsening: achievement range less than 0%.

98.5% in 2022, achieving the HP2030 target (97.0%), while the “proportion of using of nutrition labels on processed foods” has steadily increased since 2018, achieving the 2022 target (31.7%) with 36.3%. The two indicators for adequate sodium and vitamin A intake were 35.5% and 14.5% in 2022, respectively, which did not meet the targets (42.2% and 24.0%,

respectively) but showed an upward trend over the past 5 years. Meanwhile, adequate saturated fatty acid intake has been declining over the past 5 years and is approximately 30% below the 2022 target (74.0%) at 43.8%. Despite being at extremely low levels already, adequate fruit and vegetable intake (22.7%) and adequate calcium intake (14.1%) have continued

**Table 2.** The trend of nutrition indicators in the 5th Health Plan 2030

	Targets	Total					Men					Women				
	('30)	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22
Proportion of households with food security																
Household		96.9 (0.4)	96.5 (0.4)	96.3 (0.4)	96.7 (0.4)	98.5 (0.2)	-	-	-	-	-	-	-	-	-	-
Income level (age-standardized) <sup>(a),(b)</sup>																
Q5 (lowest)		88.5 (1.7)	87.0 (1.7)	86.6 (1.6)	89.6 (1.5)	94.1 (1.1)	-	-	-	-	-	-	-	-	-	-
Q1 (highest)		99.9 (0.1)	100 (0.0)	99.8 (0.1)	99.5 (0.3)	99.9 (0.1)	-	-	-	-	-	-	-	-	-	-
Proportion of population with adequate saturated fatty acid intake																
3 yr+ (age-standardized)	74.0	52.2 (0.9)	47.8 (0.8)	45.6 (0.8)	48.5 (0.9)	43.8 (0.9)	51.2 (1.1)	46.9 (1.2)	45.8 (1.2)	48.9 (1.1)	44.5 (1.3)	53.2 (1.3)	48.6 (1.0)	45.3 (1.0)	48.1 (1.3)	43.1 (1.2)
3-5		45.3 (3.9)	39.8 (3.6)	31.8 (4.3)	34.6 (4.5)	39.4 (4.5)	40.0 (5.4)	40.0 (4.6)	33.0 (5.2)	38.5 (6.2)	43.6 (7.2)	52.1 (5.5)	39.5 (6.0)	30.5 (6.4)	30.5 (6.2)	35.3 (5.5)
6-11		40.8 (3.0)	39.4 (2.9)	41.3 (3.1)	40.3 (3.5)	35.3 (3.1)	42.9 (4.5)	35.3 (3.4)	40.0 (3.7)	39.6 (4.1)	37.0 (3.9)	38.7 (3.4)	43.6 (4.1)	42.7 (4.6)	41.0 (4.5)	33.5 (4.0)
12-18		45.4 (2.9)	42.4 (2.5)	45.5 (3.2)	49.1 (2.7)	41.9 (3.1)	48.2 (3.9)	43.5 (3.8)	47.9 (4.2)	48.5 (3.8)	35.4 (4.2)	42.5 (4.2)	41.2 (3.5)	42.5 (4.7)	49.8 (3.7)	49.4 (4.8)
19-29		37.0 (2.2)	32.7 (2.1)	29.4 (2.3)	34.7 (2.2)	30.1 (2.1)	34.6 (3.0)	32.9 (3.0)	32.0 (3.5)	35.7 (3.0)	36.9 (3.3)	39.8 (3.2)	32.5 (2.9)	26.7 (2.8)	33.6 (3.1)	22.7 (2.6)
30-49		50.6 (1.4)	45.4 (1.6)	42.7 (1.5)	46.6 (1.5)	39.5 (1.4)	48.4 (1.8)	44.2 (2.3)	41.5 (2.1)	46.6 (1.9)	39.8 (2.0)	52.9 (1.9)	46.7 (1.8)	43.9 (1.8)	46.6 (2.1)	39.2 (2.0)
50-64		68.7 (1.4)	65.1 (1.4)	60.3 (1.6)	60.9 (1.7)	58.8 (1.5)	68.9 (2.0)	64.0 (1.9)	61.7 (2.1)	61.6 (2.5)	58.1 (2.3)	68.6 (1.8)	66.2 (1.8)	59.0 (2.1)	60.2 (1.9)	59.5 (1.9)
65-74		79.9 (1.6)	74.8 (1.8)	72.5 (2.2)	74.7 (1.9)	76.1 (1.7)	79.5 (2.4)	73.1 (2.4)	70.6 (3.3)	74.7 (2.9)	74.0 (2.5)	80.3 (2.0)	76.4 (2.4)	74.1 (2.5)	74.8 (2.3)	78.0 (1.9)
75+		86.3 (1.6)	79.1 (2.0)	80.6 (2.2)	82.4 (1.8)	76.8 (2.1)	85.4 (2.5)	79.1 (3.2)	77.8 (2.9)	81.8 (2.3)	74.0 (3.3)	86.8 (2.0)	79.1 (2.3)	82.3 (2.6)	82.7 (2.4)	79.0 (2.5)
Income level (age-standardized)																
Q5 (lowest)		57.0 (1.9)	46.2 (1.9)	47.4 (1.8)	52.2 (2.4)	45.1 (2.2)	53.6 (2.5)	46.0 (2.8)	49.0 (2.5)	52.8 (2.9)	46.7 (2.9)	60.3 (2.5)	46.2 (2.1)	45.6 (2.8)	51.4 (3.1)	43.0 (2.6)
Q1 (highest)		51.2 (2.0)	49.0 (1.8)	46.4 (2.3)	43.3 (1.9)	40.3 (2.2)	52.7 (2.4)	45.7 (2.5)	45.8 (2.8)	42.3 (2.8)	40.8 (2.7)	49.6 (2.6)	52.6 (2.4)	46.9 (2.7)	44.4 (2.4)	39.6 (2.8)
Proportion of population with adequate sodium intake																
1 yr+ (age-standardized)	42.0	33.7 (0.8)	33.5 (0.7)	34.6 (1.0)	35.8 (0.9)	35.5 (0.8)	23.1 (0.9)	23.0 (0.9)	23.7 (1.1)	24.1 (1.1)	24.3 (1.0)	44.4 (1.1)	44.4 (1.0)	45.9 (1.3)	47.9 (1.3)	47.0 (1.1)
1-5		61.2 (2.9)	58.2 (3.1)	52.0 (3.8)	47.7 (4.3)	50.9 (4.2)	59.9 (3.8)	54.5 (3.7)	51.9 (4.9)	48.4 (5.5)	43.9 (6.1)	62.6 (4.3)	62.1 (4.6)	52.1 (5.8)	47.0 (6.1)	58.0 (4.5)
6-11		47.8 (3.0)	46.4 (2.6)	44.0 (3.6)	46.1 (3.3)	46.0 (2.7)	45.2 (4.1)	36.0 (3.1)	37.3 (4.1)	43.3 (4.0)	37.0 (4.0)	50.4 (3.6)	57.1 (3.3)	50.7 (5.0)	48.8 (4.8)	55.6 (3.6)
12-18		35.3 (3.0)	34.3 (2.7)	39.7 (3.3)	40.8 (3.4)	36.3 (2.8)	23.8 (3.1)	27.4 (4.0)	26.0 (3.9)	26.5 (4.2)	32.4 (4.0)	47.6 (4.5)	42.1 (3.3)	56.6 (4.5)	56.9 (4.1)	40.8 (4.7)
19-29		32.3 (2.0)	33.4 (2.1)	37.4 (2.1)	35.6 (2.6)	38.3 (2.5)	21.8 (2.7)	25.3 (2.8)	25.1 (3.0)	24.1 (3.2)	25.5 (3.0)	44.4 (3.0)	42.5 (3.1)	50.6 (2.9)	48.3 (3.4)	52.2 (3.1)
30-49		26.7 (1.2)	27.1 (1.2)	28.4 (1.4)	31.0 (1.4)	30.1 (1.2)	15.0 (1.5)	14.8 (1.4)	17.5 (1.6)	17.6 (1.8)	18.5 (1.6)	39.2 (1.8)	40.1 (1.7)	39.9 (2.2)	45.4 (1.9)	42.4 (1.7)
50-64		31.4 (1.4)	31.3 (1.4)	31.0 (1.5)	33.6 (1.4)	34.7 (1.5)	17.8 (1.6)	18.9 (1.9)	17.7 (1.9)	19.6 (1.7)	18.8 (1.8)	44.8 (2.0)	43.7 (2.0)	44.2 (2.0)	47.5 (1.9)	49.5 (2.1)

Table 2. Continued 1

	Targets ( <sup>a</sup> 30)	Total					Men					Women				
		'18	'19	'20	'21	'22	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22
65–74		35.0 (2.0)	34.7 (1.8)	35.1 (2.1)	36.6 (2.0)	32.3 (1.6)	22.6 (2.4)	21.3 (2.2)	21.5 (3.0)	21.8 (2.8)	20.5 (2.3)	46.0 (2.6)	46.6 (2.3)	47.4 (2.7)	50.0 (2.5)	43.0 (2.5)
75+		34.5 (2.4)	35.3 (2.4)	36.0 (2.6)	34.6 (1.9)	32.8 (2.2)	19.4 (2.8)	22.3 (2.9)	27.5 (4.1)	20.1 (2.5)	21.1 (2.7)	43.4 (3.1)	43.0 (2.9)	41.2 (3.1)	43.3 (2.7)	42.3 (2.7)
Income level (age-standardized)																
Q5 (lowest)		37.8 (1.7)	38.2 (1.9)	41.1 (2.5)	38.0 (2.2)	38.3 (1.8)	26.5 (2.3)	27.5 (2.1)	32.7 (2.9)	25.6 (2.4)	27.6 (2.3)	48.3 (2.5)	49.4 (2.6)	49.4 (3.1)	51.2 (3.1)	49.7 (2.5)
Q1 (highest)		29.0 (1.6)	27.5 (1.5)	32.2 (1.9)	34.7 (1.9)	31.7 (1.7)	18.8 (1.9)	16.9 (1.9)	20.5 (2.3)	23.0 (2.6)	19.2 (2.3)	39.5 (2.4)	38.4 (2.0)	44.2 (2.8)	46.6 (2.6)	44.1 (2.6)
Proportion of population eating 500 g or more of fruits and vegetables per day																
6 yr+ (age-standardized)	41.0	26.2 (0.7)	28.1 (0.8)	26.2 (0.9)	25.5 (0.7)	22.7 (0.7)	29.7 (0.9)	31.1 (1.0)	29.1 (1.2)	27.9 (1.1)	24.6 (1.1)	22.7 (0.9)	25.0 (0.9)	23.3 (1.0)	23.0 (1.0)	20.7 (0.8)
6–11		11.1 (1.7)	13.6 (1.8)	13.5 (2.0)	13.0 (2.4)	15.8 (2.1)	12.6 (2.6)	14.8 (2.6)	13.0 (2.5)	10.6 (2.8) <sup>d</sup>	14.5 (2.5)	9.6 (2.2)	12.4 (2.3)	14.0 (2.7)	15.2 (3.6)	17.1 (3.2)
12–18		14.2 (1.8)	14.0 (1.9)	12.4 (2.4)	15.8 (2.4)	9.9 (1.8)	15.5 (2.6)	15.2 (2.8)	14.2 (3.2)	20.9 (3.9)	11.9 (2.5)	12.8 (3.1)	12.6 (2.4)	10.1 (2.8) <sup>d</sup>	10.2 (2.6) <sup>d</sup>	7.5 (2.7) <sup>d</sup>
19–29		15.4 (1.5)	16.7 (1.6)	12.3 (1.6)	12.5 (1.7)	9.3 (1.4)	18.5 (2.4)	19.9 (2.4)	16.4 (2.3)	15.0 (2.5)	11.9 (2.4)	11.9 (1.9)	13.0 (2.0)	7.9 (1.7)	9.6 (2.1)	6.5 (1.5)
30–49		28.5 (1.2)	32.0 (1.4)	30.4 (1.5)	26.2 (1.3)	22.5 (1.3)	32.7 (1.7)	36.5 (1.7)	32.7 (2.0)	28.9 (2.0)	24.1 (1.7)	24.1 (1.4)	27.2 (1.7)	27.9 (2.0)	23.3 (1.6)	20.7 (1.6)
50–64		44.0 (1.6)	45.2 (1.6)	42.2 (1.8)	44.4 (1.8)	38.6 (1.7)	47.6 (2.4)	46.0 (2.3)	45.5 (2.4)	45.3 (2.3)	39.5 (2.5)	40.5 (2.0)	44.5 (1.8)	38.8 (1.9)	43.5 (2.2)	37.8 (2.1)
65–74		42.7 (2.4)	41.7 (2.1)	42.6 (2.5)	44.2 (2.2)	48.8 (2.0)	46.7 (3.0)	44.2 (3.0)	46.8 (3.4)	46.9 (3.1)	52.9 (2.8)	39.2 (2.9)	39.4 (2.5)	38.9 (2.9)	41.7 (2.9)	45.0 (2.4)
75+		26.7 (2.1)	28.5 (2.3)	30.9 (2.3)	33.5 (2.1)	37.0 (2.2)	34.8 (3.3)	34.5 (3.4)	38.9 (3.3)	42.7 (3.1)	43.8 (3.1)	21.9 (2.5)	25.0 (2.6)	26.1 (2.8)	28.0 (2.6)	31.5 (3.0)
Income level (age-standardized)																
Q5 (lowest)		20.1 (1.2)	24.6 (1.4)	24.1 (1.8)	22.9 (1.7)	19.6 (1.5)	22.2 (1.9)	28.9 (2.1)	26.6 (2.8)	24.7 (2.5)	22.1 (2.2)	18.2 (1.5)	20.7 (1.8)	21.6 (2.1)	21.5 (2.3)	16.8 (1.8)
Q1 (highest)		31.6 (1.5)	32.9 (1.7)	26.4 (1.7)	29.0 (1.4)	25.2 (1.5)	37.1 (2.3)	34.8 (2.6)	27.5 (2.2)	31.9 (2.4)	25.1 (2.2)	25.9 (1.8)	31.3 (2.0)	25.3 (2.3)	26.1 (1.8)	25.4 (2.1)
Proportion of population using nutrition label on processed foods																
6 yr+ (age-standardized)	31.7	28.5 (0.8)	30.7 (1.0)	30.1 (0.9)	32.3 (0.9)	36.3 (0.9)	21.1 (1.0)	24.9 (1.1)	24.4 (1.0)	25.3 (1.3)	30.9 (1.1)	36.3 (1.1)	36.9 (1.2)	36.1 (1.2)	39.7 (1.1)	41.8 (1.2)
6–11		10.0 (1.8)	10.4 (1.5)	10.5 (1.6)	15.2 (3.0)	13.6 (2.1)	9.7 (2.3)	13.3 (2.3)	6.4 (1.9) <sup>d</sup>	11.9 (3.7) <sup>d</sup>	15.2 (3.0)	10.2 (2.4)	7.3 (1.7)	14.4 (3.0)	18.3 (3.9)	12.0 (2.7)
12–18		30.5 (2.7)	26.4 (2.8)	25.8 (2.6)	26.1 (2.5)	30.4 (2.7)	29.0 (3.5)	20.4 (3.2)	23.4 (3.5)	18.7 (3.0)	30.8 (4.2)	32.1 (3.8)	33.2 (4.1)	28.7 (4.0)	34.4 (4.2)	29.9 (4.0)
19–29		38.5 (2.4)	40.1 (2.3)	38.7 (2.1)	38.5 (2.3)	52.8 (2.4)	34.4 (3.2)	42.6 (3.3)	37.2 (2.9)	34.8 (3.4)	55.1 (3.4)	43.3 (3.2)	37.3 (3.1)	40.3 (3.0)	42.7 (2.9)	50.3 (3.0)
30–49		36.5 (1.2)	39.8 (1.6)	38.8 (1.6)	42.2 (1.5)	43.3 (1.5)	23.5 (1.7)	28.2 (1.9)	29.5 (1.9)	32.4 (2.3)	32.2 (1.9)	50.2 (1.8)	52.2 (1.9)	48.8 (2.2)	52.7 (2.0)	55.1 (2.1)
50–64		19.7 (1.1)	24.4 (1.2)	23.6 (1.4)	27.2 (1.3)	31.4 (1.5)	10.5 (1.3)	14.6 (1.5)	15.2 (1.7)	18.1 (1.7)	20.8 (1.9)	28.9 (1.7)	34.1 (1.8)	31.9 (2.3)	36.3 (1.8)	41.1 (2.0)
65–74		9.7 (1.1)	11.5 (1.3)	16.7 (1.5)	13.2 (1.2)	15.0 (1.4)	5.2 (1.3) <sup>d</sup>	10.4 (1.8)	14.3 (2.0)	7.0 (1.4)	10.9 (1.9)	13.8 (1.7)	12.5 (1.8)	18.9 (2.1)	18.8 (1.9)	18.7 (2.2)



Table 2. Continued 2

	Targets ( <sup>a</sup> 30)	Total					Men					Women				
		'18	'19	'20	'21	'22	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22
75+		3.3 (0.6)	7.0 (1.3)	4.1 (1.0)	8.5 (1.4)	8.1 (1.3)	5.0 (1.2)	8.8 (2.3) <sup>d</sup>	6.9 (1.8) <sup>d</sup>	12.0 (2.4)	7.7 (1.9)	2.3 (0.6) <sup>d</sup>	6.0 (1.6) <sup>d</sup>	2.5 (0.9) <sup>d</sup>	6.4 (1.6) <sup>d</sup>	8.4 (1.8)
Income level (age-standardized)																
Q5 (lowest)		27.8 (1.6)	27.4 (1.8)	31.5 (2.1)	32.7 (1.9)	35.8 (2.0)	21.7 (2.2)	24.8 (2.3)	28.5 (2.5)	28.8 (2.8)	33.0 (2.6)	33.7 (2.2)	30.6 (2.2)	34.5 (2.9)	36.9 (2.4)	38.4 (2.5)
Q1 (highest)		32.5 (1.8)	35.9 (2.1)	31.3 (1.7)	35.5 (2.1)	42.0 (1.8)	24.8 (2.2)	30.9 (2.5)	24.0 (2.1)	27.0 (2.8)	34.9 (2.6)	40.6 (2.4)	40.8 (2.2)	39.0 (2.1)	44.4 (2.7)	48.7 (2.3)
Proportion of healthy eating practices																
6 yr+ (age-standardized)	50.6	44.9 (0.9)	43.8 (0.8)	42.9 (1.0)	46.4 (1.0)	43.7 (0.9)	37.7 (1.3)	37.3 (1.1)	37.6 (1.4)	39.3 (1.3)	37.7 (1.3)	52.3 (1.1)	50.4 (1.1)	48.4 (1.2)	53.8 (1.4)	49.9 (1.2)
6-11		31.2 (3.1)	29.9 (2.6)	30.9 (3.2)	31.4 (3.8)	29.6 (3.4)	32.6 (4.5)	25.2 (2.8)	25.6 (3.7)	26.0 (3.7)	27.3 (4.2)	29.8 (3.9)	34.6 (4.0)	36.2 (4.8)	36.7 (5.3)	32.1 (4.2)
12-18		38.6 (2.6)	31.4 (2.5)	35.0 (3.2)	39.9 (2.8)	35.6 (2.9)	34.8 (3.8)	26.6 (3.5)	29.6 (3.8)	33.2 (3.5)	32.3 (3.9)	42.8 (4.3)	36.8 (3.1)	41.6 (4.1)	47.5 (4.2)	39.4 (4.3)
19-29		36.4 (2.4)	36.1 (2.2)	34.5 (2.3)	37.3 (2.4)	40.8 (2.4)	29.5 (3.0)	35.4 (2.9)	31.3 (3.5)	32.5 (3.0)	39.2 (3.4)	44.4 (3.2)	36.9 (3.0)	37.9 (3.4)	42.7 (3.4)	42.5 (2.9)
30-49		45.6 (1.3)	46.4 (1.4)	43.8 (1.6)	48.8 (1.6)	41.8 (1.4)	35.1 (2.0)	36.8 (1.8)	37.2 (2.1)	40.0 (2.2)	33.4 (2.0)	56.7 (1.8)	56.5 (1.7)	50.9 (1.9)	58.2 (1.9)	50.8 (2.0)
50-64		57.8 (1.7)	56.9 (1.5)	54.7 (1.6)	56.7 (1.6)	55.6 (1.6)	50.8 (2.4)	48.0 (2.1)	49.1 (2.5)	48.2 (2.2)	45.3 (2.4)	64.8 (2.0)	65.8 (1.7)	60.3 (1.8)	65.2 (1.9)	65.2 (1.9)
65-74		58.8 (2.1)	57.2 (1.9)	58.9 (2.0)	61.9 (2.1)	62.5 (1.8)	52.1 (3.4)	50.8 (2.6)	53.5 (3.5)	54.0 (3.3)	56.6 (2.5)	64.8 (2.5)	62.9 (2.5)	63.9 (2.2)	69.0 (2.1)	67.8 (2.1)
75+		53.7 (2.5)	50.5 (2.5)	54.7 (2.3)	57.2 (2.1)	55.9 (2.7)	48.1 (3.8)	48.9 (3.5)	53.8 (3.4)	55.7 (3.1)	49.7 (4.3)	57.1 (2.9)	51.5 (3.0)	55.2 (3.1)	58.2 (2.6)	60.9 (2.7)
Income level (age-standardized)																
Q5 (lowest)		45.3 (1.7)	42.4 (2.0)	46.2 (2.0)	48.6 (2.3)	44.0 (2.2)	36.1 (2.6)	39.7 (2.5)	43.1 (2.9)	41.9 (2.8)	40.2 (2.8)	53.8 (2.4)	45.5 (2.3)	49.1 (2.8)	56.0 (3.1)	47.7 (3.0)
Q1 (highest)		45.6 (2.2)	44.8 (1.7)	42.4 (2.3)	45.5 (1.8)	44.3 (1.7)	40.8 (2.8)	39.1 (2.4)	35.1 (3.0)	38.5 (2.8)	36.5 (2.4)	50.6 (2.6)	50.8 (2.3)	49.7 (2.7)	52.4 (2.4)	51.8 (2.7)
Proportion of population with adequate calcium intake																
1 yr+ (age-standardized)	21.0	16.8 (0.6)	14.4 (0.5)	14.2 (0.7)	14.9 (0.7)	14.1 (0.6)	20.1 (0.9)	16.1 (0.7)	16.2 (0.9)	17.1 (1.0)	15.4 (0.9)	13.6 (0.8)	12.9 (0.7)	12.1 (0.8)	12.8 (0.9)	13.0 (0.7)
1-5		29.5 (2.9)	26.3 (2.6)	23.6 (2.9)	31.3 (3.8)	29.5 (3.9)	33.5 (3.6)	22.2 (3.1)	21.9 (4.1)	34.6 (5.3)	27.9 (4.9)	24.9 (3.4)	30.7 (3.8)	25.6 (4.4)	27.6 (5.6)	31.2 (5.1)
6-11		16.1 (2.2)	14.7 (1.9)	15.7 (2.2)	13.6 (2.2)	13.5 (1.7)	19.0 (3.3)	16.6 (2.6)	19.9 (3.4)	13.4 (2.8)	15.5 (2.5)	13.2 (2.5)	12.9 (2.3)	11.5 (2.8)	13.9 (3.3)	11.3 (2.6)
12-18		13.3 (2.1)	7.5 (1.2)	8.2 (1.9)	11.0 (2.2)	8.4 (1.9)	11.5 (2.4)	7.9 (1.8)	13.0 (3.0)	12.4 (3.1)	10.0 (2.5)	15.3 (3.7)	7.0 (1.9) <sup>d</sup>	2.3 (1.3) <sup>d</sup>	9.5 (2.8) <sup>d</sup>	6.6 (2.5) <sup>d</sup>
19-29		16.5 (1.5)	13.6 (1.5)	12.9 (1.4)	13.8 (1.6)	11.7 (1.4)	17.7 (2.2)	14.7 (2.3)	12.4 (2.0)	14.1 (2.2)	13.4 (2.2)	15.0 (2.0)	12.4 (1.9)	13.4 (2.2)	13.5 (2.3)	9.9 (1.7)
30-49		16.6 (1.1)	14.3 (0.9)	14.1 (1.1)	12.9 (1.2)	14.6 (1.0)	19.4 (1.7)	14.9 (1.2)	15.0 (1.6)	14.2 (1.8)	13.3 (1.6)	13.6 (1.2)	13.7 (1.2)	13.1 (1.4)	11.6 (1.2)	15.9 (1.4)
50-64		17.6 (1.1)	16.8 (1.1)	15.3 (1.4)	17.1 (1.3)	14.4 (1.2)	24.4 (2.0)	21.1 (1.6)	19.2 (1.9)	21.7 (2.0)	19.0 (1.9)	10.9 (1.1)	12.4 (1.3)	11.4 (1.5)	12.5 (1.4)	10.2 (1.4)

Table 2. Continued 3

	Targets ( <sup>a</sup> 30)	Total					Men					Women				
		'18	'19	'20	'21	'22	'18	'19	'20	'21	'22	'18	'19	'20	'21	'22
65-74		16.0 (1.8)	14.3 (1.4)	16.3 (1.7)	19.4 (1.6)	16.9 (1.6)	23.6 (3.0)	20.9 (2.4)	21.9 (2.4)	27.0 (2.4)	22.4 (2.5)	9.1 (1.6)	8.4 (1.4)	11.2 (1.8)	12.6 (1.6)	12.0 (1.8)
75+		7.3 (1.1)	8.5 (1.4)	9.0 (1.7)	10.6 (1.3)	13.1 (1.7)	14.7 (2.5)	15.5 (2.7)	14.5 (2.8)	17.6 (2.6)	17.6 (2.2)	3.0 (1.0) <sup>c</sup>	4.4 (1.1) <sup>c</sup>	5.7 (1.6) <sup>c</sup>	6.4 (1.4)	9.5 (2.2)
Income level (age-standardized)																
Q5 (lowest)		15.0 (1.2)	13.0 (1.1)	13.7 (1.5)	13.6 (1.6)	12.2 (1.2)	17.8 (2.0)	16.1 (1.7)	15.1 (2.0)	15.3 (2.1)	12.2 (1.6)	12.4 (1.4)	10.0 (1.4)	12.5 (1.7)	12.0 (1.9)	12.4 (1.9)
Q1 (highest)		19.6 (1.4)	16.2 (1.3)	15.8 (1.4)	15.4 (1.4)	17.9 (1.5)	22.6 (2.1)	17.0 (1.7)	19.3 (2.1)	18.0 (1.9)	17.0 (2.3)	16.7 (2.1)	15.7 (1.7)	12.7 (1.5)	13.0 (2.0)	18.9 (2.1)
Proportion of population with adequate vitamin A intake																
1 yr+ (age-standardized)	24.0	11.8 (0.5)	12.9 (0.5)	12.2 (0.7)	14.1 (0.7)	14.5 (0.7)	11.8 (0.7)	11.9 (0.7)	10.6 (0.8)	12.4 (0.9)	13.5 (0.8)	11.7 (0.7)	13.9 (0.7)	13.8 (0.9)	15.8 (0.9)	15.5 (0.8)
1-5		24.5 (2.4)	27.4 (2.8)	26.6 (3.4)	28.7 (3.5)	53.6 (4.0)	26.7 (3.3)	23.3 (3.3)	23.8 (3.9)	31.5 (4.7)	59.0 (6.1)	22.0 (3.1)	31.8 (4.0)	29.6 (5.0)	25.6 (5.3)	48.1 (5.3)
6-11		13.8 (1.8)	19.6 (2.0)	15.8 (2.7)	25.1 (3.0)	26.6 (2.3)	10.6 (2.3)	16.1 (2.4)	15.2 (3.0)	20.2 (3.2)	25.8 (3.1)	17.0 (2.9)	23.1 (2.8)	16.5 (3.6)	29.9 (4.6)	27.5 (3.4)
12-18		9.7 (1.8)	10.4 (1.8)	7.3 (1.7)	12.9 (1.9)	6.1 (1.7) <sup>c</sup>	9.8 (2.3)	10.1 (2.2)	7.9 (2.0) <sup>c</sup>	12.8 (2.8)	7.6 (2.4) <sup>c</sup>	9.6 (2.5) <sup>c</sup>	10.8 (2.4)	6.6 (2.6) <sup>c</sup>	12.9 (2.6)	4.4 (2.0) <sup>c</sup>
19-29		10.8 (1.4)	8.8 (1.1)	8.3 (1.3)	11.1 (1.5)	7.4 (1.1)	10.1 (1.8)	8.1 (1.6)	6.8 (1.5)	10.0 (2.1)	5.1 (1.3) <sup>c</sup>	11.5 (2.0)	9.6 (1.8)	9.9 (2.0)	12.2 (2.1)	9.9 (1.8)
30-49		10.9 (0.9)	11.1 (0.8)	11.9 (1.1)	10.9 (1.0)	12.5 (0.9)	12.4 (1.4)	11.2 (1.2)	11.0 (1.4)	9.8 (1.4)	10.7 (1.3)	9.3 (1.0)	11.0 (1.1)	12.9 (1.4)	12.1 (1.3)	14.5 (1.3)
50-64		11.3 (1.1)	14.9 (1.2)	13.1 (1.1)	14.3 (1.1)	12.6 (1.1)	9.5 (1.4)	13.0 (1.5)	9.0 (1.2)	9.3 (1.2)	10.2 (1.5)	13.2 (1.4)	16.8 (1.5)	17.2 (1.7)	19.2 (1.7)	14.7 (1.6)
65-74		12.2 (1.4)	12.4 (1.3)	13.5 (1.4)	15.7 (1.4)	15.2 (1.5)	9.8 (2.0)	11.1 (1.8)	9.7 (1.8)	14.1 (2.1)	14.9 (2.1)	14.4 (1.9)	13.6 (1.6)	16.9 (1.9)	17.1 (1.8)	15.4 (1.8)
75+		5.3 (1.1)	10.0 (1.6)	10.7 (2.0)	11.8 (1.8)	11.2 (1.6)	6.5 (2.0) <sup>c</sup>	10.3 (2.3)	9.2 (2.0)	10.2 (2.3)	13.8 (2.0)	4.6 (1.0)	9.8 (1.8)	11.6 (2.4)	12.8 (2.1)	9.1 (1.8)
Income level (age-standardized)																
Q5 (lowest)		11.5 (1.2)	11.8 (1.0)	11.2 (1.2)	11.3 (1.5)	13.1 (1.3)	10.0 (1.6)	12.0 (1.6)	10.0 (1.6)	11.3 (2.1)	10.8 (1.5)	13.0 (1.5)	11.8 (1.3)	12.4 (1.7)	11.5 (1.6)	15.6 (2.1)
Q1 (highest)		11.9 (1.1)	15.0 (1.1)	12.6 (1.4)	16.0 (1.3)	17.5 (1.4)	13.7 (1.6)	12.7 (1.5)	10.7 (1.5)	13.3 (1.9)	16.3 (1.9)	9.6 (1.3)	17.5 (1.8)	14.6 (1.9)	18.6 (2.0)	18.5 (1.8)
Proportion of elderly population with inadequate nutrient intake																
75+ yr	12.0	18.5 (1.8)	29.4 (2.1)	31.4 (2.7)	27.3 (2.1)	21.5 (1.9)	16.1 (2.7)	24.7 (3.1)	31.5 (3.5)	25.7 (2.6)	18.0 (2.5)	19.9 (2.4)	32.1 (2.6)	31.3 (3.5)	28.2 (2.7)	24.4 (2.4)
Income level (age-standardized)																
Q5 (lowest)		14.1 (3.0)	30.3 (4.0)	43.9 (6.3)	39.7 (5.4)	33.6 (4.4)	7.9 (4.6) <sup>d</sup>	23.6 (5.9)	54.9 (7.8)	31.7 (6.6)	34.4 (6.4)	18.3 (4.4)	33.9 (5.8)	37.2 (7.7)	44.7 (7.0)	33.0 (5.7)
Q1 (highest)		19.5 (4.4)	29.5 (4.9)	23.7 (4.5)	19.8 (3.8)	13.4 (3.4) <sup>c</sup>	9.9 (4.3) <sup>c</sup>	27.8 (7.7) <sup>c</sup>	18.0 (6.0) <sup>c</sup>	23.7 (7.3) <sup>c</sup>	3.0 (1.8) <sup>d</sup>	24.2 (6.0)	30.4 (6.2)	26.4 (6.3)	17.9 (4.8) <sup>c</sup>	21.6 (5.3)

Unit: %. --not available. <sup>a</sup>Classify of the monthly average household equalized income (monthly average income/ $\sqrt{\text{number of household members}}$ ) into quintiles by gender and age group. <sup>b</sup>Age-standardized proportion was calculated using the age and gender specific structures of estimated population based on the 2005 Korea Census. <sup>c</sup>Coefficient of variation from above 25% to less 50%. <sup>d</sup>Coefficient of variation above 50%.

to decline, moving further away from the target (41.0% and 21.0%, respectively). The proportion of healthy eating practices increased slightly in 2021 but decreased again in 2022 to 43.7%, falling short of the target of 50.6%. Finally, the proportion of elderly population with inadequate nutrient intake increased by 3.0%p from 18.5% in 2018 to 21.5% in 2022, requiring a reduction of approximately 10%p to attain the target (12.0%).

When analyzing nutrition indicators by gender, men tended to have a lower proportion of adequate intake of saturated fatty acid and sodium, use of nutrition labels on processed foods, and healthy eating practices than women. Meanwhile, women tended to have a lower proportion of adequate intake of fruit and vegetable, as well as calcium, compared to men. Men and women had similar proportion of adequate vitamin A intake. By age, the proportion of adequate saturated fatty acid intake was lowest among those under 40 and lowest among those aged 19–29, at less than half the target. The proportion of adequate intake fruit and vegetable intake and vitamin A intake were lowest those aged 12 to 29. Specifically, adequate fruit and vegetable intake was 10% or less, significantly below the target of 41.0%, while adequate vitamin A intake also fell to 10% or less, which is less than half the target. Adequate calcium intake was also lowest among those aged 12–29, at half the target. Adequate sodium intake was lowest among those aged 30–49, with those aged 65 and older showing a decline, unlike other age groups showing improvements. The use of nutrition labels on processed foods was lowest among those aged 6–11 and 65 or older, and especially low among those aged 75 or older, at 8.1%. Healthy eating behaviors tended to be lower among those aged 6–18.

As for the equity indicator for nutrition, the gap in the

proportion of households with food security between income groups, a representative indicator, was 5.7% in 2022, meeting the target (7.0%), with improvements in the lower income groups leading to a reduction in the gap. The gap in adequate fruit and vegetable intake between income groups was also found to be on target, but the gap has narrowed over the past 5 years with a significant decline in the highest income groups, with a relatively high proportion of adequate intake. The two income gap indicators of adequate saturated fatty acid intake and adequate sodium intake did not meet the target but showed improvements. However, the reasons for the decrease in the gap for the two equity indicators were different: for adequate sodium intake, the gap decreased because of a steady increase in the proportion of higher income groups with low adequate intake; but for adequate saturated fatty acid intake, the gap decreased owing to a steady decrease in the proportion of both higher and lower income groups, with a larger decrease for lower income groups. Furthermore, the equity indicators for the use of nutrition labels on processed foods, adequate calcium and vitamin A intake, and the proportion of elderly population with inadequate nutrient intake showed a declining trend, deviating from the target. For all four equity indicators, the gap increased, with lower income groups improving less or worsening more than higher income groups.

## Discussion

An examination of the HP2030 nutrition targets for 18 indicators based on 2022 showed that two indicators, the proportion of households with food security and the use of nutrition labels on processed foods, met the HP2030 targets. Meanwhile, two indicators, adequate sodium intake and

adequate vitamin A intake, did not meet the targets; however, they showed improvement. The five indicators of adequate saturated fatty acid, adequate fruit and vegetable intake, adequate calcium intake, healthy eating practices, and the undernourished elderly population showed a worsening trend. The equity indicators for nutrition also showed that two indicators were achieved, two were improving, one was retained, and four were declining.

This study examined the performance of each indicator by subgroup and identified the groups requiring improvement. The results showed that adequate saturated fatty acid intake was lowest among those aged 19–29; adequate sodium intake was lowest among those aged 30–49; adequate fruit and vegetable, calcium, and vitamin A intake was lowest among those aged 12–29; and the use of nutrition labels on processed foods was lowest among those aged 6–11 and 65 or older. For equity indicators, a few indicators showed positive progress, with improvements in indicators for vulnerable groups leading to a reduced gap. Meanwhile, others showed minor improvements or major deteriorations in indicators that increased the gap, such as adequate calcium intake and adequate vitamin A intake, and the proportion of elderly population with inadequate nutrient intake. In HP2030, the nutrition sector, “strengthening the foundation for healthy eating behaviors and optimal nutrition,” emphasizes population-specific nutrition care, including “expanding and enhancing access to population-specific nutrition care services” as the first specific initiative [6]. To achieve the HP2030 targets, it will be necessary to continue to identify vulnerable groups by indicator and develop more efficient and specific improvement measures.

It has been more than 5 years since the enactment of HP2030, and a supplemental plan is now required. The gap

in the proportion of households with food security between income groups—a representative indicator for nutrition—met the HP2030 target as of 2022. The use of nutrition labels on processed foods also met the target. In this context, it appears prudent to consider whether to maintain indicators that have already achieved their targets, including the representative indicators, or to adjust their targets when preparing a supplementary plan. Currently, KNHANES is planning for its tenth survey (2025–2027); changes may be introduced to the survey methodology. In developing a supplementary plan for HP2030, it is essential to evaluate potential modifications to the survey methodology and data sources, including KNHANES.

## Declarations

**Ethics Statement:** The study was approved by the Institutional Review Board of the Korea Disease Control and Prevention Agency (IRB no. 2018-01-03-P-A, 2018-01-03-C-A, 2018-01-03-2C-A, 2018-01-03-5C-A, 2018-01-03-4C-A).

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**Conflict of Interest:** The authors have no conflicts of interest to declare.

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## 2023–2024절기 인플루엔자 국가예방접종 지원사업 현황

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### 초 록

2023–2024절기 인플루엔자 국가예방접종 사업에서는 생후 6개월부터 13세 어린이와 임신부 및 65세 이상 어르신의 인플루엔자 예방접종을 지원하였다. 본 논문에서는 2023–2024절기 인플루엔자 국가예방접종 지원사업의 주요 결과를 살펴보고자 한다. 각 대상의 접종률은 어르신과 임신부는 82.5%와 53.0%로 이전 절기 대비 0.6%p와 2.6%p 증가하였고, 어린이는 69.5%로 1.5%p 감소하였다. 인플루엔자 예방접종 후 이상반응 신고는 총 176건으로 10만 건당 신고건 1.5건이었다. 2023–2024절기 주요 결과를 알아보고 향후 인플루엔자 국가예방접종 지원사업 발전을 위한 토대로 활용하고자 한다.

**주요 검색어:** 인플루엔자; 예방접종; 접종률

### 서 론

인플루엔자는 매년 11월부터 다음해 4월까지 계절적으로 유행하는 급성호흡기바이러스 질환으로 갑작스러운 고열, 인후통, 기침, 콧물, 근육통을 일으켜 모든 연령군에서 질병을 초래한다. 특히, 65세 이상 어르신, 영유아, 임신부 등은 인플루엔자 감염 시 이환율 및 사망률이 높아지는 고위험군에 해당한다[1].

우리나라에서는 1997년부터 65세 이상 어르신에게 보건소에서 인플루엔자 국가예방접종을 시행하였고 2015년부터는 민간 위탁의료기관에서 접종까지 지원 범위를 확대하였다. 또한, 65세 이상 어르신에게는 80% 수준의 사망 예방효과가

있는 것으로 알려져 있어 중증질환 및 사망을 낮추기 위해 예방접종은 매우 중요하다[1]. 소아청소년의 인플루엔자 예방접종은 중증 인플루엔자에 대한 효과 63%, 생명을 위협하는 인플루엔자에 대한 효과 75% 수준으로 알려져 있다[2]. 이에, 어린이 인플루엔자 사업에서는 2016년 생후 6개월부터 12개월 미만, 2017년 생후 6개월부터 59개월, 2018년 생후 6개월부터 12세, 2020년 생후 6개월부터 13세 어린이까지 예방접종 지원 대상을 점진적으로 확대하였다[3]. 임신부는 40% 수준의 입원 예방효과[4]와 함께 태아에게 항체를 전달하여 3개월 미만 영아의 경우 53%의 효과, 임신 3기 인플루엔자 예방접종을 한 산모의 영아는 52% 효과[5]가 있는 것으로 알려져 있어 2019년부터 국가예방접종으로 지원하고 있다.

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**KDCA**

Korea Disease Control and Prevention Agency

**핵심요약****① 이전에 알려진 내용은?**

인플루엔자 국가예방접종은 생후 6개월부터 13세 어린이와 임신부 및 65세 이상 어르신을 대상으로 시행하고 있다.

**② 새로이 알게 된 내용은?**

인플루엔자 접종률은 어린이 69.5%, 임신부 53.0%, 어르신 82.5%로 지난 절기 대비 어르신과 임신부는 각각 0.6%p, 2.6%p 증가하였고 어린이는 1.5%p 감소하였다.

**③ 시사점은?**

코로나바이러스감염증-19 대유행 이후 2022-2023절기부터 인플루엔자 바이러스가 계절성 유행 양상이 시작되어 인플루엔자 고위험군인 어린이와 임신부 및 어르신의 감염 예방이 중요하다.

2020-2021절기에는 코로나바이러스감염증-19(코로나19) 대유행에 따른 인플루엔자와 코로나19의 동시 유행을 대비하기 위해 62세부터 64세에 해당하는 어르신, 14세부터 18세 청소년, 장애인 연금·수당, 의료급여 수급권자에게 인플루엔자 예방접종을 지원하였다.

본 논문에서는 2023-2024절기 인플루엔자 국가예방접종 지원사업 대상에 따른 예방접종 실적 등 주요 결과를 살펴보고, 향후 인플루엔자 국가예방접종 사업의 원활한 운영을 위한 기초자료로 활용하고자 한다.

**본 론****1. 2023-2024절기 인플루엔자 국가예방접종 지원사업 개요**

2023-2024절기 인플루엔자 국가예방접종 사업에서는 생후 6개월부터 13세 어린이, 임신부, 65세 이상 어르신을 대상으로 인플루엔자 예방접종을 지원하였다. 인플루엔자 예방접종은 약 2주 후부터 항체가 생성되어 평균 6개월 정도 지속되고 유행 시기 등을 종합적으로 고려하여 사업기간을 선정하였다(표 1). 어린이는 2회 접종 소아의 적절한 면역획득(1차 접종 후 최소 4주 간격으로 2차 접종) 기간을 고려하여 9월부터 사업을 시작하였다. 어르신은 사업시작 초기에 접종이 집중되므로 안전한 접종을 위해 연령별로 접종 시기를 구분하여 시행하였다.

인플루엔자 예방접종은 전국에 소재하고 있는 보건소, 보건지소, 보건진료소와 위탁의료기관 22,400개소에서 시행하였으며 대상자는 주소지와 관계없이 해당 기관에 방문하여 인플루엔자 4가 백신으로 국가지원 접종을 받을 수 있었다. 2023-2024절기 인플루엔자 예방접종은 어르신 82.0%, 임신부 55.0%, 어린이(1회 및 2회 1차) 75.0% 접종률을 목표로 사업을 추진하였다.

예방접종률은 질병관리청 질병보건통합관리시스템을 활용하여 산출하였다. 예방접종통합관리시스템에 등록된 대상 중 해당 연도 출생자를 구분하였고, 예방접종 기록은 위탁의료기관과 보건소에서 시행하고 전산 등록된 예방접종 기록을

**표 1. 2023-2024절기 인플루엔자 국가예방접종 지원사업 대상자 및 사업기간**

대상자	사업기간
어린이(2010.1.1.-2023.8.31. 출생아)	2회 접종 대상 <sup>a)</sup> 2023.9.20.-2024.4.30.
	1회 접종 대상(13세 이하) 2023.10.5.-2024.4.30.
임신부	2023.10.5.-2024.4.30.
어르신(1958.12.31. 이전 출생자)	75세 이상 2023.10.11.-2024.4.30.
	70-74세 이상 2023.10.16.-2024.4.30.
	65-69세 이상 2023.10.19.-2024.4.30.

<sup>a)</sup>9세 미만 인플루엔자 예방접종을 처음 받거나 2023년 6월 30일까지 총 2회 미만 접종한 대상.



기준으로 산출하였다. 어린이 접종률은 1회 접종자 대상의 접종률과 2회 접종 대상자 중 1차 접종 완료자에 대한 접종률로 산출하였다. 임신부는 당해 절기 대상자 수 확인이 어려운 점을 고려하여, 공개된 2022년 출생아 수로 대체하여 산출하였다. 예방접종 건수와 예방접종률은 국가지원 및 본인부담 접종 건을 포함하여 산출하였다.

## 2. 어르신 인플루엔자 예방접종 실적

어르신 인플루엔자 사업대상 9,766,851명 중 8,059,311명이 접종하여, 접종률은 82.5%로 지난 절기 81.9% 대비 0.6%p 증가하였다(그림 1).

어르신 대상은 사업 초기에 접종이 집중되므로 안전한 접종을 위해 연령에 따라 세 구간으로 분산하였고 나이가 많은

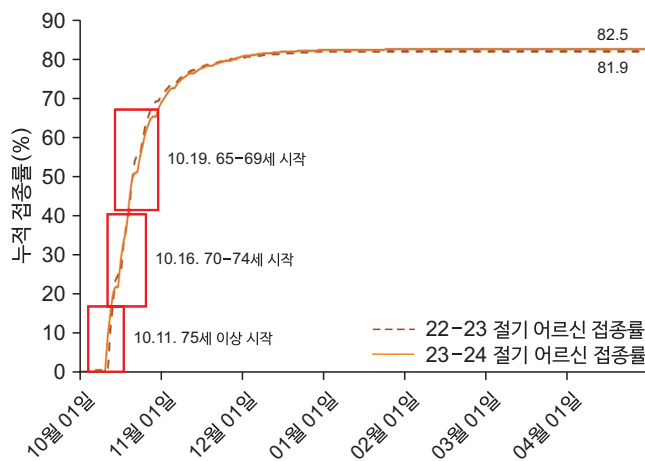


그림 1. 어르신 누적 접종률 지난 절기 비교

어르신들이 먼저 접종할 수 있도록 접종 시기를 구분하였다.

접종 기관별로는 보건소에서 4.4% (354,477명), 위탁의료기관에서 95.6% (7,704,834명)가 접종하여 지난 절기 보건소 4.6%, 위탁의료기관 95.3%에 비해 위탁의료기관에서의 접종이 소폭 증가하였다(표 2). 어르신 지역별 접종률은 전북(85.5%), 전남(85.3%), 충북(84.6%) 순으로 높았으며, 접종 건수는 경기(2,129,402건), 서울(1,727,198건)이 많았다.

인플루엔자 및 코로나19 예방접종은 동시접종이 가능하고 일부 사업기간이 맞물려 있어 어르신 대상의 동시접종률을 확인해 보았다. 어르신 사업대상 중 동시접종을 실시한 인구는 질병보건통합관리시스템을 활용하여 코로나19 예방접종관리시스템과 예방접종통합관리시스템을 통해 확인하였다. 어르신 사업대상 중 총 991,969명(10.2%)이 동시접종을 받았는데 이는 어르신 인플루엔자 접종자의 12.3%에 해당하고 지난 절기(308,117명)보다 3배 이상 증가한 것으로 2023-2024절기에 인플루엔자와 코로나19 백신 동시접종을 권고한 효과로 볼 수 있다.

## 3. 임신부 인플루엔자 예방접종 실적

임신부 대상으로는 2019년부터 인플루엔자 예방접종을 지원하고 있다. 2023-2024절기에는 접종대상자 253,598명 중 134,357명이 접종하였다. 접종률은 53.0%로 지난 절기 50.4% 대비 2.6%p 증가하였다. 접종 기관별로는 보건소에서 0.4% (599명), 위탁의료기관에서 99.6% (133,758명)가 접

표 2. 절기별, 접종기관별 인플루엔자 접종실적

구분		대상자 수	접종실적			예방접종률
			계	보건소	위탁기관	
어르신	2023-2024절기	9,766,851	8,059,311 (100.0%)	354,477 (4.4%)	7,704,834 (95.6%)	82.5%
	2022-2023절기	9,310,653	7,629,522 (100.0%)	357,603 (4.6%)	7,271,919 (95.3%)	81.9%
임신부	2023-2024절기	253,598	134,357 (100.0%)	599 (0.4%)	133,758 (99.6%)	53.0%
	2022-2023절기	265,262	133,735 (100.0%)	543 (0.4%)	133,192 (99.6%)	50.4%
어린이	2023-2024절기	5,127,904	3,562,735 <sup>a)</sup> (100.0%)	29,832 <sup>a)</sup> (0.8%)	3,532,903 <sup>a)</sup> (99.2%)	69.5% <sup>a)</sup>
	2022-2023절기	5,333,556	3,785,738 <sup>a)</sup> (100.0%)	32,669 <sup>a)</sup> (0.9%)	3,753,069 <sup>a)</sup> (99.1%)	71.0% <sup>a)</sup>

단위: 명(%). <sup>a)</sup>1회 접종 및 2회 접종자의 1차 접종 건 기준.

종하여 지난 절기와 비슷하였다(표 2). 지역에 따른 임신부 접종률은 울산(62.5%), 서울(58.0%), 강원(57.9%) 순이었고, 경기(77,910건)와 서울(40,608건) 순으로 접종 건수가 많았다.

#### 4. 어린이 인플루엔자 예방접종 실적

2023-2024절기 어린이 대상 접종률은 69.5%로 대상자 5,127,904명 중 3,562,735명(1회 접종, 2회 1차 접종 포함)이 접종하였고(표 2), 지난 절기 대비 접종률(71.0%)이 0.6%p 감소하였다(그림 2).

연령에 따른 접종률은 생후 6-59개월 82.5%, 60-83개월 75.7%, 7-9세는 68.8%, 10-12세는 61.6%, 13세는 49.2%

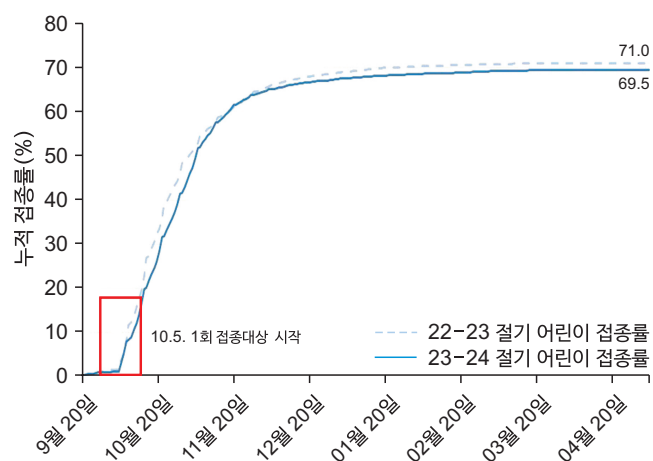


그림 2. 어린이 누적 접종률 지난 절기 비교

로 지난 절기와 비슷하게 접종률이 높을수록 연령이 낮아짐을 확인하였다. 접종 기관별로는 전체 3,797,079건(1회 접종, 2회 1차 및 2차 접종 포함) 중 보건소에서 31,748건(0.8%), 위탁의료기관에서 3,765,331건(99.2%) 접종하였다. 지역에 따른 어린이 접종률은 인천 72.8%, 충남 72.3%, 경기 70.9% 순으로 높았으며, 연령대별로는 6-59개월 84.7%로 인천이 높았고, 60-83개월 78.7%로 인천과 충남이 높았고, 7-9세 72.3%로 인천이 높았고, 10-12세 65.0%, 13세 53.3%로 충남이 높았다.

#### 5. 인플루엔자 예방접종 후 이상반응 신고현황

2023-2024절기 인플루엔자 예방접종 후 이상반응 신고는 176건으로 예년보다 다소 증가하였으나 10만 건당 신고 건 1.5건이었다(2019-2020절기 105건, 2020-2021절기 1,626건, 2021-2022절기 108건, 2022-2023절기 118건). 어린이 이상반응 신고는 41건(작년 44건), 임신부 이상반응 신고는 38건(작년 0건), 어르신 이상반응 신고는 97건(작년 74건)이었다(표 3).

예방접종 후 신고된 이상반응 종류는 일반 이상반응 166건(94.3%), 중증 이상반응 10건 중 사망 4건(2.3%), 아나필락시스 의심 1건(0.6%), 중환자실 입원 등 5건(2.8%)이었다.

표 3. 2023-2024절기 인플루엔자 예방접종 후 신고된 이상반응 종류

구분	계 (A=B+C)	일반 이상반응(B)	중증 이상반응			예방접종 실적(D)	10만 건당 이상반응 신고율 (E=A/D*10 <sup>5</sup> )	
			소계 (C=C1+C2+C3)	사망 (C1) <sup>a)</sup>	아나필락시스 의심 (C2)			주요 이상반응 (C3) <sup>b)</sup>
총계	176	166	10	4	1	5	11,756,403	1.50
어르신	97	89	8	4	0	4	-	-
임신부	38	38	0	0	0	0	-	-
어린이	41	39	2	0	1	1	-	-

단위: 건. --not available. (A) 누계 기간: 2023.9.20.-2024.4.30. (예방접종 후 이상반응으로 의심되어 신고된 건으로 의료기관이나 보건소에서 신고한 정보를 기반으로 산출하였으며, 백신과 이상반응 간 인과성을 제시하는 것은 아님. 신고현황 분류는 새로운 정보 추가 시 변경될 수 있음). (B) 일반 이상반응은 예방접종 후 접종부위 발적, 통증, 부기, 근육통, 발열, 두통, 오한 등 흔하게 발생하는 증상을 포함. (C) 중증 이상반응은 다음의 사례 포함. ① 사망, ② 아나필락시스 의심, ③ 주요 이상반응: 중증이상반응 신속대응 등. <sup>a)</sup>사망: 심정지(1), 기타(3), <sup>b)</sup>주요 이상반응: 패혈증(2), 길랭-바레 증후군(1), 뇌증/뇌염(1), 위팔신경종 말초신경병증(1).

## 결 론

2023-2024절기 인플루엔자 국가예방접종 지원사업은 생후 6개월부터 13세 어린이, 임신부, 65세 이상 어르신을 대상으로 시행하였다. 어르신과 임신부는 지난 절기 대비 접종률이 증가하였고 어린이 접종률은 감소하였다. 이는 최근 5년 중 인플루엔자가 가장 많이 발생한 가운데 초기 접종 시기에 어린이들 사이에 유행한 것이 주요 원인으로 보인다.

코로나19 발생 이후 인플루엔자 유행은 없었으나 2022-2023절기부터 계절성 유행 양상이 시작되었고[6] 2023-2024절기 의사환자분율은 과거 절기 대비 학생층에서 높은 발생이 지속되었다. 이에 인플루엔자 접종을 독려하기 위해 대상별 맞춤 홍보와 안전한 예방접종을 위한 관리를 강화하여 2024-2025절기 인플루엔자 국가예방접종 지원사업을 준비할 필요가 있다.

## Declarations

**Ethics Statement:** Not applicable.

**Funding Source:** None.

**Acknowledgments:** None.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Author Contributions:** Conceptualization: SHA, WKL. Data curation: SHA, HWH, MJK, YRK, JYL. Methodology: SHA, HWH, MJK. Supervision: WKL, DWL, YRK. Writing

– original draft: SHA, MJK, WKL. Writing – review & editing: SHA, WKL, DWL.

## Supplementary Materials

Supplementary data are available online.

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# Immunization Program against Influenza in Korea, 2023–2024 Season

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## ABSTRACT

The national influenza vaccination program for the 2023–2024 season targeted influenza immunization for children aged 6 months to 13 years, pregnant women, and seniors aged 65 years and older. This study aimed to analyze the primary outcomes of the national influenza vaccination program for the specified season. The vaccination rates for the identified groups were 82.5% for older adults and 53.0% for pregnant women, reflecting increases of 0.6 and 2.6 percentage points, respectively, compared with the corresponding values in the preceding season. Conversely, the vaccination rate for children declined by 1.5 percentage points, reaching 69.5%. There were 176 reported cases of adverse events following influenza vaccination, equaling 1.5 reports per 100,000 vaccinations. We intend to investigate the principal findings for the 2023–2024 season and use them as a foundation for improving the national influenza vaccination program in the future.

**Key words:** Influenza; Immunization; Vaccination coverage

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## Introduction

Influenza is an acute respiratory viral disease, which is most prevalent seasonally from November to April. It can affect all age groups, with symptoms such as sudden fever, sore throat, cough, runny nose, and muscle aches. Older adults (aged 65 and above), young children, infants, and pregnant women are considered high-risk groups because of their higher morbidity and mortality rates from influenza infection [1].

In the Republic of Korea, a national influenza vaccination program for older adults aged 65 and above has been available

through public health centers since 1997, and in 2015 the scope of the program was expanded to include private medical institutions under contract. Vaccination is known to reduce mortality by up to 80% among older adults aged 65 and above, making it crucial for preventing severe disease and death [1]. Similarly, influenza vaccination is effective in reducing the risk for severe and life-threatening influenza by 63% in children and 75% in adolescents [2]. Accordingly, the influenza vaccination program for children has expanded gradually: in 2016, eligibility included infants and children aged 6 months to under 12 months; in 2017, it extended to those aged 6 months to

## Key messages

### ① What is known previously?

Individuals aged 6 months to 13 years, pregnant women, and those aged 65 years and older are eligible for the national influenza vaccination program.

### ② What new information is presented?

The influenza vaccination rates among children, pregnant women, and older adults were 69.5%, 53.0%, and 82.5%, respectively. Compared with the previous season, in the 2023–2024 season, vaccination rates for older adults and pregnant women increased by 0.6 and 2.6 percentage points, respectively, whereas the rate for children declined by 1.5 percentage points.

### ③ What are implications?

Following the coronavirus disease 2019 pandemic, seasonal influenza viruses began circulating during the 2022–2023 season, highlighting the need to prevent infections in children, pregnant women, and older adults.

59 months; by 2018, to children aged 6 months to 12 years; and in 2020, to those aged 6 months to 13 years [3]. For pregnant women, influenza vaccination reduces hospitalization by 40% [4] and offers 53% protection for infants under 3 months by passing antibodies to the fetus. Moreover, vaccination during the third trimester is 52% effective in protecting the child [5]. Consequently, the national influenza vaccination program for pregnant women has been in place since 2019.

During the 2020–2021 season, the influenza vaccination program was made available to older adults aged 62–64 years, adolescents aged 14–18 years, and recipients of disability pensions/allowances and medical aid. This was in preparation for the potential overlap of influenza and coronavirus disease 2019 (COVID-19) outbreaks during the pandemic.

This report reviews the key achievements of the national

influenza vaccination program for the 2023–2024 season, including vaccination performance, and aims to provide baseline data for future operation of the program.

## Main text

### 1. Overview of the National Influenza Vaccination Program for the 2023–2024 Season

For the 2023–2024 influenza vaccination season, children aged 6 months to 13 years and older adults aged 65 and above were targeted. The vaccination period was selected considering the influenza season and the fact that antibodies are formed approximately two weeks after vaccination and lasts for approximately six months (Table 1). For children, the program began in September, allowing sufficient time for them to acquire adequate immunity through two doses (with at least four weeks between doses). For older adults, the vaccination period was adjusted according to age to ensure safe administration, as vaccinations were concentrated in the early phase of the program.

Vaccinations were provided at 22,400 locations nationwide, including at public health centers, health subcenters, primary health care posts, and contracted medical institutions. Eligible individuals could receive government-subsidized quadrivalent influenza vaccine by visiting any of the listed institutions, regardless of their place of residence. This season's program aimed to achieve vaccination rates of 82% for older adults, 55% for pregnant women, and 75% for children (single dose and first of two doses).

The vaccination rate was calculated using the Integrated Disease Health Management System of the Korea Disease Control and Prevention Agency. Among the individuals registered in the Integrated Vaccination Management System, those

**Table 1.** Vaccination target and period, 2023–2024 season

Vaccination target		Vaccination period
Children (Born in Jan. 1, 2010–Aug. 31, 2023)	Two doses of flu vaccine <sup>a)</sup>	2023.9.20.–2024.4.30.
	One doses of flu vaccine (under 13 yr)	2023.10.5.–2024.4.30.
Pregnant women		2023.10.5.–2024.4.30.
Elderly people (Born before Dec. 31, 1958)	Over 75 yr	2023.10.11.–2024.4.30.
	70–74 yr above	2023.10.16.–2024.4.30.
	65–69 yr above	2023.10.19.–2024.4.30.

<sup>a)</sup>Under the age of 9 who have received influenza vaccination for the first time or who have received a total of less than two doses by June 30, 2023.

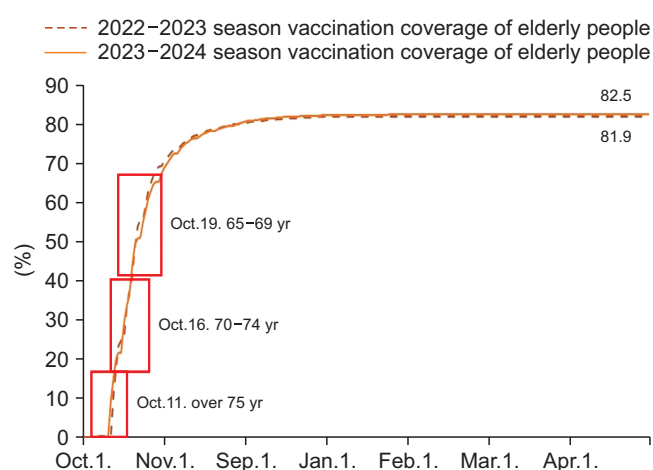
born in the applicable year were identified. Immunization records were compiled by contracted medical institutions and public health centers, and vaccination rates were calculated according to these electronic records. The vaccination rate among children was calculated on the basis of the percentage of children receiving a single dose and those completing the first of two doses. The vaccination rate for pregnant women was estimated using publicly available data on the number of children born in 2022, given the challenge of identifying the actual number of eligible individuals for that season. Both government-subsidized and out-of-pocket vaccinations were included in the calculation of vaccination cases and rates.

## 2. Performance of Influenza Vaccination for Older Adults

Among 9,766,851 older adults eligible for the influenza vaccination program, 8,059,311 were vaccinated, representing a vaccination rate of 82.5%, which was an increase of 0.6% from 81.9% in the previous season (Figure 1).

For older adults, vaccinations are typically concentrated in the early stages of the program. Thus, to ensure safety, the vaccination period was divided into three based on age groups, with the oldest group receiving vaccinations first.

Regarding vaccination institutions, 4.4% of vaccinations



**Figure 1.** Number of vaccinations elderly people compared vaccination coverage to last season

were administered at public health centers (n=354,477), and 95.6% at contracted medical institutions (n=7,704,834), showing a slight increase in vaccinations at contracted medical institutions compared with the previous season's figures of 4.6% at public health centers and 95.3% at contracted medical institutions (Table 2). In terms of vaccination rates among older adults by region, North Jeolla Province had the highest rate (85.5%), followed by South Jeolla Province (85.3%) and North Chungcheong Province (84.6%). Gyeonggi Province (n=2,129,402) and Seoul (n=1,727,198) had the highest number of vaccinations administered.

Since the concurrent administration of influenza and COVID-19 vaccines is allowed and a part of the program



**Table 2.** Number of vaccinations by health services

Characteristics		No. of population	No. of vaccinated			Vaccine coverage
			Total	Public health center	Medical institution	
Elderly people	2023–2024 season	9,766,851	8,059,311 (100.0%)	354,477 (4.4%)	7,704,834 (95.6%)	82.5%
	2022–2023 season	9,310,653	7,629,522 (100.0%)	357,603 (4.6%)	7,271,919 (95.3%)	81.9%
Pregnant women	2023–2024 season	253,598	134,357 (100.0%)	599 (0.4%)	133,758 (99.6%)	53.0%
	2022–2023 season	265,262	133,735 (100.0%)	543 (0.4%)	133,192 (99.6%)	50.4%
Children						
	2023–2024 season	5,127,904	3,562,735 <sup>a)</sup> (100.0%)	29,832 <sup>a)</sup> (0.8%)	3,532,903 <sup>a)</sup> (99.2%)	69.5% <sup>a)</sup>
	2022–2023 season	5,333,556	3,785,738 <sup>a)</sup> (100.0%)	32,669 <sup>a)</sup> (0.9%)	3,753,069 <sup>a)</sup> (99.1%)	71.0% <sup>a)</sup>

Values are presented as number (%). <sup>a)</sup>1 Shot and first vaccination of 2 shot.

period overlapped, the rate of concurrent vaccination among older adults was also examined. The population of older adults who received both vaccines concurrently was identified through the COVID-19 Vaccination Management System and Integrated Vaccination Management System, using data from the Integrated Disease Health Management System. Among eligible older adults, a total 991,969 (10.2%) received both vaccines, representing 12.3% of those who received the influenza vaccine. This marks a more than three-fold increase compared with the previous season (n=308,117), likely due to recommendations encouraging concurrent vaccination for the 2023–2024 season.

### 3. Performance of Influenza Vaccination for Pregnant Women

Influenza vaccination for pregnant women has been available since 2019. In the 2023–2024 season, 134,357 out of 253,598 eligible pregnant women were vaccinated, resulting in a vaccination rate of 53%. This represents an increase of 2.6% from the previous season's rate of 50.4%. Regarding the vaccination institutions, 0.4% of vaccinations were administered at public health centers (n=599), while 99.6% occurred

at contracted medical institutions (n=133,758), which is consistent with the previous season (Table 2). In terms of vaccination rates among pregnant women by region, Ulsan had the highest rate (62.5%), followed by Seoul (58.0%) and Gangwon Province (57.9%). Meanwhile, Gyeonggi Province (n=77,910) and Seoul (n=40,608) reported the highest number of vaccination cases.

### 4. Performance of Influenza Vaccination for Children

For the 2023–2024 season, 3,562,735 out of 5,127,904 children were vaccinated, resulting in a vaccination rate of 69.5% (single dose and first of two doses) (Table 2). This represents a decrease of 0.6% from the previous season's rate of 71.0% (Figure 2).

Vaccination rates by age were 82.5, 75.7%, 68.8%, 61.6%, and 49.2% for children aged 6–59 months, 60–83 months, 7–9 years, 10–12 years, and 13 years, respectively. Vaccination rates were higher in younger age groups, similar to the previous season. In terms of vaccination institutions, among a total of 3,797,079 vaccination cases (including single doses and first and second doses), 31,748 cases (0.8%) were administered



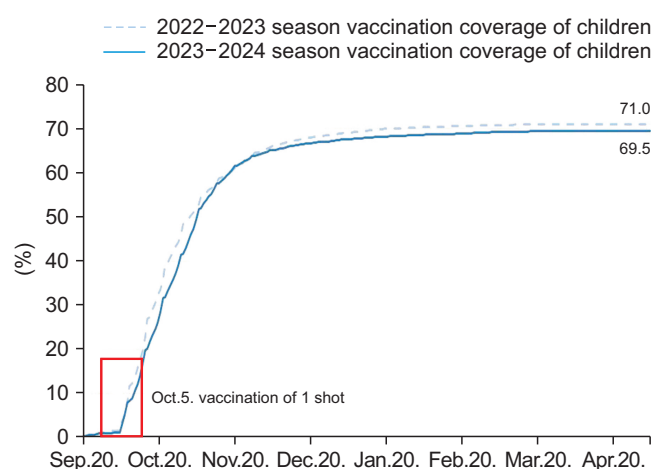
at public health centers, while 3,765,331 cases (99.2%) occurred at contracted medical institutions. By region, Incheon had the highest rate (72.8%), followed by South Chungcheong Province (72.3%) and Gyeonggi Province (70.9%). For specific age groups, the highest rates were found in Incheon for children aged 6–59 months (84.7%), Incheon and South Chungcheong Province for children aged 60–83 months (78.7%), Incheon for children aged 7–9 years (72.3%), South Chungcheong Province for children aged 10–12 years (65.0%),

and South Chungcheong Province for children aged 13 years (53.3%).

## 5. Reports of Adverse Events after Influenza Vaccination

During the 2023–2024 season, 176 cases of adverse events after influenza vaccination were reported, representing a slight increase from the previous season, but the number of reported cases per 100,000 was 1.5 (105, 1,626, 108, and 118 cases in 2019–2020, 2020–2021, 2021–2022, and 2022–2023 seasons, respectively). The number of adverse event cases reported among children, pregnant women, and older adults was 41 (44 in previous season), 38 (0 in previous season), and 97 (74 in previous season), respectively (Table 3).

The types of adverse events reported after vaccination included 166 cases of general adverse events (94.3%); 10 cases of serious adverse events, including four deaths (2.3%); one case of suspected anaphylaxis (0.6%); and five cases requiring admission into intensive care (2.8%).



**Figure 2.** Number of vaccinations children compared vaccination coverage to last season

**Table 3.** Types of adverse events, 2023–2024 season

Characteristics	Total (A=B+C)	General adverse events (B)	Severe adverse events				No. of vaccinated (D)	Adverse events rate per 100 thousand (E=A/D*10 <sup>5</sup> )
			Total (C=C1+C2+C3)	Death (C1) <sup>a)</sup>	Suspected anaphylaxis (C2)	Major adverse events (C3) <sup>b)</sup>		
Total	176	166	10	4	1	5	11,756,403	1.50
Elderly people	97	89	8	4	0	4	-	-
Pregnant women	38	38	0	0	0	0	-	-
Children	41	39	2	0	1	1	-	-

==not available. (A) Accumulated period: September 20, 2023 to April 30, 2024 (It was calculated based on information reported by medical institutions or public health centers as a suspected adverse event after vaccination, and does not suggest causality between vaccines and adverse events. Report status classification may be changed when new information is added). (B) Common adverse events include common symptoms such as redness, pain, swelling, myalgia, fever, headache, chills after vaccination. (C) Severe adverse event. ① Death, ② Suspected anaphylaxis, ③ Major adverse events: causality assessment for serious AEFI etc. <sup>a)</sup>Death: cardiac arrest (1), etc (3). <sup>b)</sup>Major adverse events: sepsis (2), Guillain-Barre syndrome (1), encephalopathy/encephalitis (1), brachial plexopathy (1).

## Conclusions

The national influenza vaccination program for the 2023–2024 season was available for children aged 6 months to 13 years, pregnant women, and older adults aged 65 and older. Vaccination rates among older adults and pregnant women increased compared with the previous season. In contrast, the vaccination rate among children decreased, which can be attributed to early outbreaks in this demographic during a season when influenza cases reached their highest number in the past five years.

Although there have not been major influenza epidemics since the COVID-19 pandemic, a pattern of seasonal epidemics began during the 2022–2023 season [6]. The percentage of suspected cases during the 2023–2024 season remained high among school-aged children compared with previous seasons. Therefore, it is essential to prepare for the national influenza vaccination program for the 2024–2025 season by enhancing management for safe vaccinations and implementing targeted promotions to encourage influenza vaccination among different populations.

## Declarations

**Ethics Statement:** Not applicable.

**Funding Source:** None.

**Acknowledgments:** None.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

**Author Contributions:** Conceptualization: SHA, WKL. Data curation: SHA, HWH, MJK, YRK, JYL. Methodology: SHA, HWH, MJK. Supervision: WKL, DWL, YRK. Writing – original draft: SHA, MJK, WKL. Writing – review & editing: SHA, WKL, DWL.

## Supplementary Materials

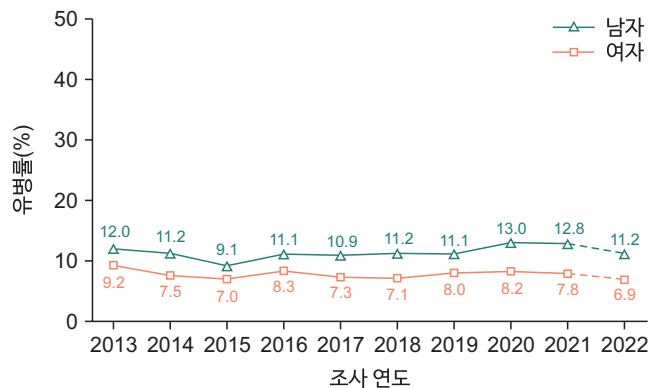
Supplementary data are available online.

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## 당뇨병 유병률 추이, 2013-2022년

만 19세 이상 당뇨병 유병률(연령표준화)은 2022년 기준 남자는 11.2%, 여자는 6.9%이었다. 남녀 모두 연령이 증가할수록 유병률이 높았고, 70세 이상을 제외하고 남자의 유병률이 여자보다 높았다(그림 1, 2).

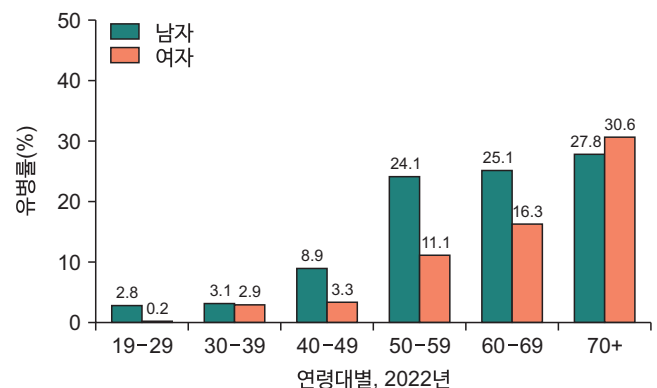


**그림 1.** 당뇨병 유병률 추이, 2013-2022년

\*당뇨병 유병률: 공복혈당이 126 mg/dl 이상이거나 의사진단을 받았거나 혈당강하제 복용 또는 인슐린 주사를 사용하거나, 당화혈색소 6.5% 이상인 분을

※2022년 임상검사 분석기관 변경으로 이전 연도와 추이 비교 시 유의 필요

※그림 1에 제시된 통계치는 2005년 추계인구로 연령표준화



**그림 2.** 연령대별 당뇨병 유병률, 2022년

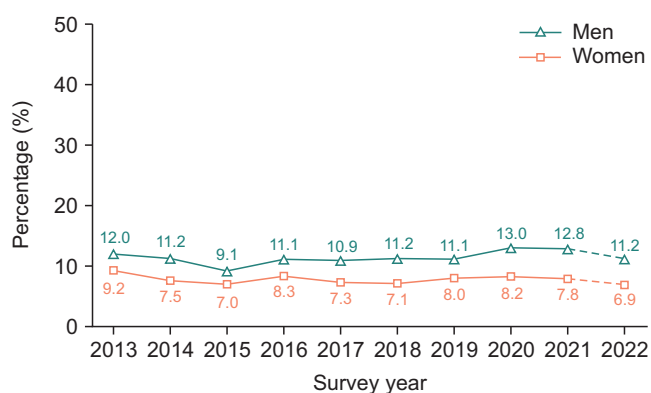
**출처:** 2022년 국민건강통계, <https://knhanes.kdca.go.kr/>

**작성부서:** 질병관리청 만성질환관리국 건강영양조사분석과

## QuickStats

# Trends in the Prevalence of Diabetes, 2013–2022

The prevalence of diabetes among Korean adults aged  $\geq 19$  years was 11.2% in men and 6.9% in women in 2022 (Figure 1). The prevalence of diabetes increased with age in both sexes. The prevalence in men was higher than that in women before the age of 70 (Figure 2).

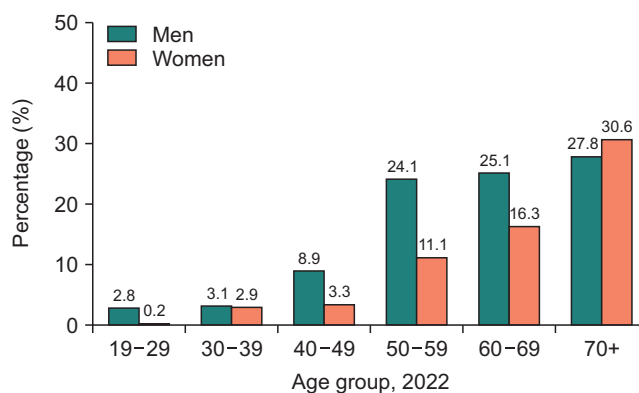


**Figure 1.** Trends in the prevalence of diabetes, 2013–2022

\*Prevalence of diabetes: percentage of people of fasting blood glucose  $\geq 126$  mg/dl, diagnosed with diabetes by a doctor, taking oral hypoglycemic agents or insulin, or HbA1c  $\geq 6.5\%$

※The change in the laboratory in 2022 need to be considered to compare trends.

※Age-standardized prevalence was calculated using the 2005 Population Projections for Korea.



**Figure 2.** Prevalence of diabetes by age group, 2022

**Source:** Korea Health Statistics 2022, <https://knhanes.kdca.go.kr/>

**Reported by:** Division of Health and Nutrition Survey and Analysis, Department of Chronic Disease Prevention and Control, Korea Disease Control and Prevention Agency