



## 2023년 HIV/AIDS 발생과 진료 현황 및 사망통계

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### 초 록

**목적:** 인체면역결핍바이러스(human immunodeficiency virus, HIV) 감염인 발생 현황과 HIV/후천성면역결핍증(acquired immune deficiency syndrome, AIDS) 진료 현황 및 AIDS 관련 사망 정보를 파악하여 국내 AIDS 정책에 활용하고자 한다.

**방법:** HIV 감염인 발생 현황은 질병보건통합관리시스템에 신고된 자료와 역학조사서 자료를 분석하였고, HIV/AIDS 진료 현황은 건강보험통계연보와 의료급여통계연보 및 보건복지부에서 발표한 의료서비스 이용현황을 분석하였으며, HIV/AIDS 관련 사망은 국가데이터처의 사망원인통계자료를 분석하였다.

**결과:** 2023년에 신고된 신규 HIV 감염인은 1,005명으로 내국인 749명(74.5%), 외국인 256명(25.5%)이었고 남성이 903명(89.9%)으로 나타났다. 연령대는 30대 35.4%(356명)로 가장 많았고, 감염경로는 성 접촉에 의한 감염으로 99.6%(564명)가 대담하였다. HIV 감염 관련 질환으로 진료받은 실인원은 2023년 16,963명(건강보험가입자, 의료급여 대상자 포함)이었다. 2023년 우리나라에서 HIV 질환으로 입원한 환자의 평균 재원일수는 32.6일로 폐렴 22.6일, 결핵 22.1일보다 길었다. 국가데이터처의 사망원인통계 중 2023년 HIV/AIDS 원인 사망자는 45명이었다. 2023년 내국인 생존 감염인은 16,459명으로 전년 대비 591명 증가하였고, 60세 이상 고령층의 비율이 2020년 16.4%에서 2023년 19.4%로 매년 증가하고 있다.

**결론:** 국내 HIV 생존 감염인의 증가에 따른 고령화 대비 등이 필요하며 이에 질병관리청은 「제2차 후천성면역결핍증 예방관리대책(2024-2028년)」에 따라 신규 감염예방, 조기 발견, 신속 치료 및 치료 유지 지원, 건강권 보장, 관리기반 구축 등을 위해 보다 강화된 정책을 추진할 예정이다.

**주요 검색어:** 인체면역결핍바이러스(HIV); 후천성면역결핍증(AIDS); 건강관리; 사망원인

### 서 론

1985년 국내 첫 인체면역결핍바이러스(human immunodeficiency virus, HIV) 감염인이 신고된 이래로 매년 1,000

여명의 신규 감염인이 발생하고 있다. 항레트로바이러스 치료(antiretroviral therapy, ART)의 놀라운 발전과 치료 접근성 향상으로 HIV 감염인은 하루 한 알의 약물 복용만으로 바이러스가 효과적으로 억제되고 면역기능이 회복되어, HIV/후천성

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**핵심 요약**

① 이전에 알려진 내용은?

우리나라 신규 인체면역결핍바이러스(human immunodeficiency virus, HIV) 감염인은 매년 1천 명 정도 발생하였다.

② 새로이 알게 된 내용은?

매년 우리나라의 20-30대 신규 HIV 감염인 비율이 가장 높지만 60세 이상 고령층의 생존 감염인을 비교했을 때 2014년 대비 2023년에 2배(2,106명) 증가하였고 매년 그 비율이 증가하고 있다.

③ 시사점은?

HIV 감염인의 항레트로바이러스제 치료 효과 향상으로 기대여명이 증가하고 있으며 이에 따라 HIV 감염인의 고령화가 진행되고 있다. 질병관리청은 2030년까지 2023년 대비 신규 감염인 50% 감소를 목표로 신규 감염예방, 조기 발견, 신속 치료 및 치료 유지 지원, 건강권 보장, 관리기반 구축 등을 위한 정책을 추진할 예정이다.

면역결핍증(acquired immune deficiency syndrome, AIDS)은 현재 관리가 가능한 만성질환으로 변화하였다. 기존에는 중증 또는 진행성 HIV 질환이 있거나 CD4+ T 세포 수가 350 cell/ $\mu$ l 이하인 성인에서 ART를 시작하였으나, 2015년 세계보건기구(World Health Organization)는 CD4+ T 세포 수와 관계없이 진단과 동시에 ART를 시작할 것을 권고하였다. 이후 사망률과 중증 HIV 이환율, 질병 진행이 감소했으며 치료 참여율과 초기 치료 연계성이 향상되고 면역 회복이 개선되었으며, HIV 전파가 감소하는 등의 긍정적인 변화가 알려졌다 [1].

2023년 전 세계 신규 HIV 감염인은 130만 명이었고, 63만 명이 AIDS 관련으로 사망하였으며 이는 2010년 대비 사망자 수가 약 절반으로 감소한 것으로 나타났다[2]. AIDS 관련 사망률은 2004년 이후 약 69% 줄었고, 신규 감염률은

2010년 이후 약 39% 감소하였다. 30.7백만 명 이상이 항레트로바이러스 치료를 받고 있으며, HIV 감염인의 약 77%가 치료 중이다.

세계 HIV/AIDS 현황과 비교하여 국내 HIV 신규 감염과 HIV/AIDS 진료 현황, HIV/AIDS로 인한 사망원인 자료 파악을 하여 국내 정책자료로 활용하고자 한다.

**방 법**

**1. HIV 감염인 발생 현황과 HIV/AIDS 진료 현황**

HIV/AIDS 신고 현황은 2023년에 확인검사기관인 보건환경연구원, 질병관리청에서 HIV 검사 양성 판정된 건을 「후천성면역결핍증예방법 시행규칙」 신고 서식을 기반으로 구축된 질병보건통합관리시스템을 통해 신고·보고된 자료와 역학조사 자료를 분석하여 성별·연령별·감염경로 및 검사 동기 등을 분석하였다.

HIV/AIDS 진료 현황은 국민건강보험공단과 건강보험심사평가원에서 공동으로 공표하는 통계연보인 건강보험통계연보와 의료급여통계연보를 활용하였다. 건강보험통계연보는 건강보험제도 운영을 통해 수집한 보건의로 데이터를 기반으로 건강보험 적용인구, 재정현황, 급여실적, 심사실적, 질병통계 등 다양한 통계 정보를 제공하고 있으며, 의료급여통계연보는 의료급여 수급권자 및 의료급여기관 현황, 급여실적, 심사실적, 질병통계 등을 제공하고 있다. 건강보험통계연보(환자 진료일 기준)와 의료급여통계연보(의료기관 청구일 기준)에서 인체면역결핍바이러스 질환(질병코드 B20-B24)으로 진료 받은 현황을 분석하여 HIV/AIDS 진료 현황을 파악하였다[3,4].

**2. 의료서비스 이용 현황<sup>1)</sup>**

보건복지부에서 국가통계포털에 공표하는 의료서비스 이

1) 보건복지부는 질병·상해 등으로 인한 의료이용 실태를 파악하고 국가통계포털(KOSIS)과 국제기구인 경제협력개발기구(Organisation for Economic Co-operation and Development, OECD)에 통계를 제공하고 있다. 국가통계포털에는 의료기관 종별 입원·퇴원건수 등 9개 입원지표와 의료기관 종별·지역별 외래진료 횟수 등 외래지표 4개를 확인할 수 있고, OECD Health statistics에서는 국민 1인당 의사 및 치과의사 외래 진료 횟수 등 외래지표 2개와 병원 전체 퇴원 건수·퇴원율, 진단 범주별 퇴원 건수·퇴원율 등 입원지표 10개를 확인할 수 있다.

용 현황 자료 중 국민 1인당 의사 외래 진료 횟수(국민 1인이 1년 동안 의사의 총 외래 진료 횟수를 총 인구수로 나눈 값)와 병원 평균 재원일수(연간 재원일수[bed-days]의 합을 퇴원건수로 나눈 값, 재원일수 1일 이상, 의원, 당일 입·퇴원, 낮병동 제외)와 진단범주별 환자 1인당 평균 입원일수를 분석하였다 [5,6].

### 3. 사망원인통계

국가데이터처에서 매년 인구동향조사를 통하여 지방자치단체에서 받은 사망신고서 및 사망진단서를 기반으로 국내에서 사망한 내국인의 사망 규모와 질병별 사망원인 등을 2024

년 10월에 2023년 자료를 공표하였으며 사망자의 주요 사망 원인과 연도별, 연령별 HIV/AIDS 원인(질병코드 B20-B24)으로 사망한 자료를 분석하였다[7].

## 결 과

### 1. HIV/AIDS 신규 감염인 발생 현황

2023년에 신고된 HIV 신규 감염인은 1,005명으로 2022년 대비 5.6%(60명) 감소하였고 내국인은 749명으로 전년 대비 9.1%(75명) 감소하였으나 외국인인 256명으로 전년 대비 6.2%(15명) 증가하여 전체에서 외국인이 차지하는 비중이

표 1. HIV/AIDS 신고 현황(2014-2023년)

구분	2014년	2015년	2016년	2017년	2018년	2019년	2020년	2021년	2022년	2023년
합계	1,191	1,151	1,196	1,190	1,206	1,223	1,013	973	1,065	1,005
인구 10만 명당 발생률(명) <sup>a)</sup>	2.3	2.3	2.3	2.3	2.4	2.4	2.0	1.9	2.1	2.0
외국인	110	133	137	182	218	217	197	203	241	256
내국인	1,081	1,018	1,059	1,008	988	1,006	816	770	824	749
생존감염인	9,481	10,346	11,246	12,083	12,936	13,819	14,528	15,186	15,868	16,459
성별										
남자	8,761 (92.4)	9,587 (92.7)	10,436 (92.8)	11,235 (93.0)	12,053 (93.2)	12,891 (93.3)	13,580 (93.5)	14,214 (93.6)	14,871 (93.7)	15,441 (93.8)
여자	720 (7.6)	759 (7.3)	810 (7.2)	848 (7.0)	883 (6.8)	928 (6.7)	948 (6.5)	972 (6.4)	997 (6.3)	1,018 (6.2)
연령별(세)										
0-9	2 (0.0)	2 (0.0)	2 (0.0)	2 (0.0)	1 (0.0)	1 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10-19	68 (0.7)	64 (0.6)	54 (0.5)	55 (0.5)	43 (0.3)	49 (0.4)	34 (0.2)	29 (0.2)	23 (0.1)	18 (0.1)
20-29	1,482 (15.6)	1,692 (16.4)	1,892 (16.8)	2,025 (16.8)	2,103 (16.3)	2,171 (15.7)	2,135 (14.7)	2,009 (13.2)	1,823 (11.5)	1,638 (10.0)
30-39	2,199 (23.2)	2,281 (22.0)	2,448 (21.8)	2,619 (21.7)	2,858 (22.1)	3,139 (22.7)	3,400 (23.4)	3,770 (24.8)	4,161 (26.2)	4,488 (27.3)
40-49	2,708 (28.6)	2,894 (28.0)	3,028 (26.9)	3,154 (26.1)	3,277 (25.3)	3,379 (24.5)	3,473 (23.9)	3,467 (22.8)	3,552 (22.4)	3,596 (21.8)
50-59	1,935 (20.4)	2,148 (20.8)	2,372 (21.1)	2,563 (21.2)	2,755 (21.3)	2,951 (21.4)	3,108 (21.4)	3,279 (21.6)	3,384 (21.3)	3,526 (21.4)
≥60	1,087 (11.5)	1,265 (12.2)	1,450 (12.9)	1,665 (13.8)	1,899 (14.7)	2,129 (15.4)	2,377 (16.4)	2,632 (17.3)	2,925 (18.4)	3,193 (19.4)

단위: 명(%). HIV/AIDS=human immunodeficiency virus/acquired immune deficiency syndrome. <sup>a)</sup>국가데이터처 주민등록연앙인구 기준. Reused from Korea Disease Control and Prevention Agency (2024) [8].

2022년 22.6%에서 25.5%로 증가한 것으로 나타났다(표 1) [8].

성별은 89.9%(903명)가 남성이고, 여성은 10.1%(102명)으로 나타났다. 내국인(749명) 중 남자는 95.9%(718명), 외국인(256명) 중 남자는 72.3%(185명)로 남성 비율이 차이가 있다. 연령대는 30대가 35.4%(356명), 20대가 28.7%(288명), 40대가 15.7%(158명) 순으로 20-30대가 전체의 64.1%를 차지하였다. 신규 내국인 감염인 중 역학조사에 응답한 566명 중에 성 접촉에 의한 감염이 99.6%(564명)이며, 감염 경로를 성 접촉으로 응답한 남자 감염인(540명) 중 동성 간 성 접촉은 56.7%(306명)였다.

내국인 생존 감염인은 2023년 16,459명으로 전년 대비 591명이 증가하였고 남자가 93.8%(15,441명), 여자가 6.2%(1,018명)였다. 연령대는 60세 이상이 3,193명(19.4%), 60세 미만이 13,266명(80.6%)으로, 60세 이상 고령층은 2020년 16.4%, 2021년 17.3%, 2022년 18.4%, 2023년 19.4%로 그 비율이 매년 증가하는 추세이다.

## 2. HIV/AIDS 진료 현황

국민건강보험공단에서 발표한 통계 중 HIV/AIDS (질병 코드 B20-B24)로 진료받은 실인원<sup>2)</sup>은 2014년 8,962명(건강보험 가입자, 의료급여 대상자 포함)이었고, 이후 꾸준히 증가

하여 2023년 16,963명으로 나타났다. 건강보험 가입자의 연간 1인당 본인부담금은 2014년 993,792원이었고, 2023년은 888,439원으로 줄었다. 의료급여 대상자 중 HIV로 진료 받은 실인원은 연간 2,000명 정도이고, HIV 관련 질환으로 진료 받을 시 본인부담금은 면제가 되며, 연간 1인당 기관부담금<sup>3)</sup>은 2014년 11,739원이었으며, 2023년에는 9,387원으로 감소하였다(표 2).

## 3. 의료서비스 이용 현황

2023년 국민 1인당 의사에게 외래 진료를 받은 횟수는 연간 18.0회로 경제협력개발기구(Organisation for Economic Co-operation and Development, OECD) 회원국 중 가장 많았고, 국내 전체 입원환자의 1인당 평균재원일수<sup>4)</sup>는 2023년 기준으로 17.5일로 OECD 회원국 중에서 일본(26.3일)에 이어 두 번째로 긴 편에 속하며 OECD 평균인 8.1일보다 2배 이상 길게 나타났다. 진단범주별 공표된 내용은 크게 감염성 질환, 신생물, 혈액 관련 질환, 내분비계, 정신 및 행동장애, 신경계, 눈, 귀 등 질환과 순환계, 호흡계, 소화계, 피부, 근골격계, 비뇨·생식계, 임신·출산 관련, 손상·중독·외인, 신종 질환 등 포괄적으로 제공하고 있으며 이 중 특정 감염성 및 기생충성 질환(A00-B99) 통계를 살펴보면 2023년 평균 입원일수가 폐렴증(A40-A41)이 119.9일로 가장 높았고, 두 번째로

**표 2. 의료 보장별 HIV/AIDS 진료 현황**

구분	2014년	2015년	2016년	2017년	2018년	2019년	2020년	2021년	2022년	2023년
진료 실인원	8,962	9,883	10,905	11,877	13,412	13,070	14,525	15,352	16,188	16,963
인구 10만 명당 <sup>a)</sup>	17.7	19.4	21.3	23.2	26.1	25.5	28.3	29.9	31.6	33.2
1인당 부담금 전체	1,005,531	1,022,905	1,040,260	1,060,249	1,038,837	1,018,581	986,832	950,222	910,524	897,826
건강보험	993,792	1,011,923	1,029,208	1,049,231	1,030,365	1,002,960	976,311	940,533	901,522	888,439
의료급여 <sup>b)</sup>	11,739	10,982	11,052	11,018	8,472	15,621	10,521	9,689	9,001	9,387

단위: 명, 원. HIV/AIDS=human immunodeficiency virus/acquired immune deficiency syndrome. <sup>a)</sup>국가데이터처 주민등록연앙인구 기준. <sup>b)</sup>기관 부담금. Reused from Health Insurance Review and Assessment Service, National Health Insurance Service (2024) [3,4].

- 진료실인원수는 건강보험 가입자 중 1년간(1.1.-12.31.) 진료 받은 환자수로 상병별, 월별, 요양기관종별로 실인원을 각각 산정하여 합산하는 경우 중복 인원이 있을 수 있어 총 실인원수와 일치하지 않음.
- 기관부담금은 지급이 결정된 총진료비 중, 의료급여법에 따른 환자 본인부담금을 제외하고 의료급여기금에서 부담한 금액.
- 평균재원일수는 연간 재원일수(bed-days)의 합을 퇴원건수로 나눈 값으로 재원일수 1일 이상, 의원, 당일 입·퇴원, 낮병동 제외한 값임.

HIV 질환(B20-B24)이 32.6일로 폐렴(J12-J18, 22.6일), 결핵(A15-A19, 22.1일)보다 높게 나타났다[6].

#### 4. 사망원인통계

2023년 국내에서 사망자는 총 352,511명으로 전년 대비 5.5%(20,428명) 감소하였고 전체 사망의 41.9%는 암, 심장질환, 폐렴으로 나타났으며, 특정 감염성 및 기생충성 질환(A00-B99) 중 코로나바이러스감염증-19(코로나19)는 7,442명(10만 명당 14.6명)으로 2022년 3위에서 2023년

10위로 하락하였고, 결핵(A15-A19)은 1,331명(10만 명당 2.6명)으로 15위, HIV/AIDS 원인(B20-B24)으로 인한 사망자는 45명(10만 명당 0.1명)으로 낮게 나타났다.

HIV/AIDS 원인으로 인한 사망자는 2011년 124명을 정점으로 매년 감소하는 추세이고 연령대는 1990년대에는 30대 사망자가 가장 많았고, 2005년부터 2012년까지는 40대가 가장 많았으며, 2013년 이후에는 50대가 많은 것으로 나타났다. 코로나19로 인한 사망은 60세 이상에서 가장 많았고, 결핵은 80세 이상 고령층에서 사망자가 가장 많았다(표 3).

표 3. 주요 감염병별 사망통계 현황

구분	2014년	2015년	2016년	2017년	2018년	2019년	2020년	2021년	2022년	2023년
인체면역결핍증										
총계	121	104	88	91	85	76	54	64	54	45
인구 10만 명당 사망률(명) <sup>a)</sup>	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
성별										
남자	106 (87.6)	100 (96.2)	82 (93.2)	83 (91.2)	79 (92.9)	70 (92.1)	51 (94.4)	61 (95.3)	48 (88.9)	41 (91.1)
여자	15 (12.4)	4 (3.8)	6 (6.8)	8 (8.8)	6 (7.1)	6 (7.9)	3 (5.6)	3 (4.7)	6 (11.1)	4 (8.9)
연령별(세)										
0-9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10-19	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
20-29	4 (3.3)	3 (2.9)	4 (4.5)	1 (1.1)	2 (2.4)	1 (1.3)	1 (1.9)	2 (3.1)	0 (0.0)	2 (4.4)
30-39	12 (9.9)	9 (8.7)	8 (9.1)	6 (6.6)	7 (8.2)	9 (11.8)	4 (7.4)	4 (6.3)	8 (14.8)	9 (20.0)
40-49	29 (24.0)	22 (21.2)	15 (17.0)	24 (26.4)	20 (23.5)	14 (18.4)	9 (16.7)	14 (21.9)	7 (13.0)	6 (13.3)
50-59	35 (28.9)	29 (27.9)	30 (34.1)	30 (33.0)	20 (23.5)	22 (28.9)	19 (35.2)	22 (34.4)	17 (31.5)	10 (22.2)
60-69	26 (21.5)	22 (21.2)	16 (18.2)	13 (14.3)	19 (22.4)	14 (18.4)	10 (18.5)	13 (20.3)	12 (22.2)	10 (22.2)
≥70	15 (12.4)	19 (18.3)	15 (17.0)	17 (18.7)	17 (20.0)	16 (21.1)	11 (20.4)	9 (14.1)	10 (18.5)	8 (17.8)
폐렴										
코로나19 <sup>b)</sup>	-	-	-	-	-	-	950	5,030	31,280	7,442
결핵 <sup>c)</sup>	2,305	2,209	2,186	1,816	1,800	1,610	1,356	1,430	1,322	1,331
바이러스 간염	720	667	628	548	584	649	536	493	447	459

단위: 명(%) 혹은 명. 코로나19=코로나바이러스감염증-19. <sup>a)</sup>국가데이터처 주민등록연앙인구 기준. <sup>b)</sup>코로나19 (U07.1, U07.2, U10). <sup>c)</sup>호흡기 결핵 (A15-A16), 기타 결핵(A17-A19) 포함. Reused from Ministry of Statics Korea Press release (2024) [7].

## 논 의

2023년에 신고된 신규 HIV 감염인은 1,005명으로 내국인은 749명(74.5%), 외국인인은 256명(25.5%)이었고, 남성이 903명으로 전체의 89.9%를 차지하였다. 신규 감염 외국인인은 2021년 20.7%, 2022년 22.6%로 매년 증가하는 추세이다(그림 1).

내국인 생존 감염인은 16,459명(인구 10만 명당 32.2명)으로 전년 대비 3.7%(591명) 증가하였고, 해마다 신규 감염인 중 20~30대가 많이 발생함으로써 생존 감염인의 연령대 중 30대가 가장 많지만 60세 이상의 비율도 2021년 17.3%, 2022년 18.4%, 2023년 19.4%로 매년 증가하고 있다.

2023년 우리나라 국민 1인당 의사에게 외래 진료를 받은 횟수는 연간 18.0회로 OECD 국가 중 가장 많았고, 이는 회원국들 평균인 6.5회의 약 2.8배 높은 수준이었으며, 이는 우리나라 국민들이 의료 이용에 대한 인식과 선호도가 친화적이며, 의료 이용을 많이 하려는 경향으로 분석하였다[9]. 질병 분류별 평균 재원일수(OECD) 중 HIV 관련 질환으로 입원하는 경우 33일로 폐렴(28일), 결핵(22일)보다 길게 나타났다. 이는 HIV 감염인이 입원할 경우 입원일수가 길고 치료기간이 오래 걸리며 이에 따른 경제적 손실 등이 발생하므로 평소 애꾸준히 ART를 잘 받음으로써 합병증 및 악화 방지를 하는 것

이 중요하다. 사망원인통계에 따르면, HIV를 원인으로 한 사망자 중 2013년 이후에 50대에서 사망이 많이 발생한 것은 감염 초기 단계에서 HIV 감염을 인지하지 못한 채 진단 시점에 이미 AIDS 단계로 진행된 사례로, 이로 인해 치료의 적기를 놓쳐 사망에 이른 결과로 판단된다[10].

의료기술의 발달로 조기 진단의 정확도가 향상되었고, 다양한 ART 약제 개발로 치료 적응증이 확대되어 치료 대상자가 증가하였다. 우리나라는 연간 1인당 치료 비용도 2023년 89만 원 정도로 감소하였으나 생존 감염인의 평균 수명이 증가함에 따라 노화로 인한 만성질환의 발병률이 증가할 것으로 예상된다. 실제로 미국에서는 AIDS 관련 사망 및 기회 감염 비율은 낮지만, 간질환(바이러스성 간염과 동시 감염), 고지혈증, 당뇨, 심혈관질환, 골 감소증 등의 발생이 증가하였다. 특히, 심혈관질환은 생존 감염인의 사망 또는 입원 원인의 세 번째 주요 원인으로 보고되었다[11]. 우리나라는 감염인의 건강보험 보장성 확대(2009년부터 산정특례 10% 적용), 의료급여 보장성 강화(HIV 관련 진료 시 본인부담금 면제) 및 진료비 본인부담금 10%를 보건소의 지원(국비 50%, 지방비 50%)을 통해 진료비 부담이 감소하고 후발 협조 의료기관 등을 통하여 의료접근성과 편리성을 향상시켰다.

국가데이터처의 사망원인통계 중 HIV/AIDS 원인으로 인한 사망자는 2011년 124명이 최고치였고 해마다 감소하면

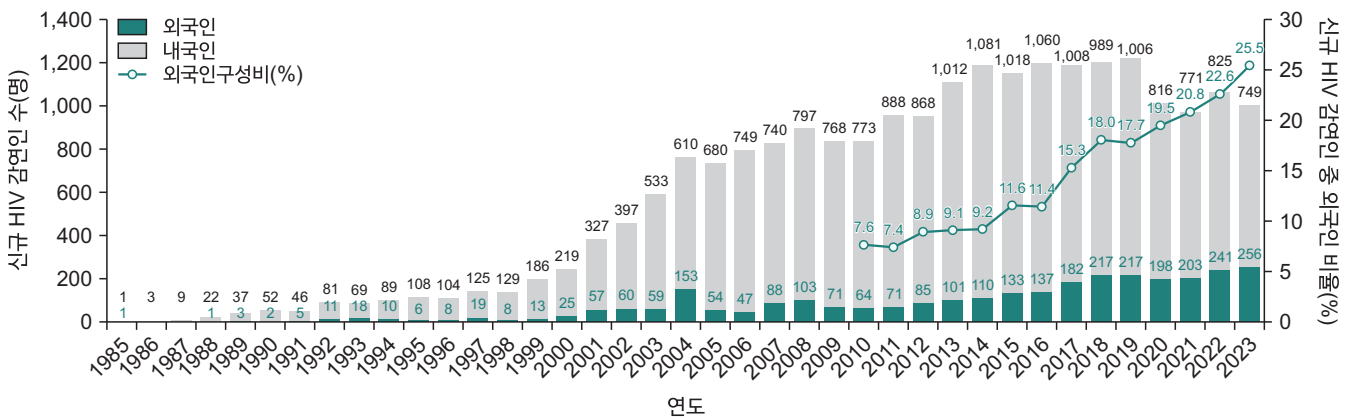


그림 1. 연도별 HIV 신규 감염인 발생 추이  
HIV=human immunodeficiency virus.

서 2023년 45명으로 줄었다. 해마다 사망자의 연령대가 고령층으로 이동하고 있는 것으로 나타나고, 매년 우리나라의 20-30대 신규 HIV 감염인 비율이 가장 높지만 60세 이상 고령층의 생존 감염인을 비교했을 때 2014년 대비 2배(2,106명) 증가하였다. 진료 받고 있는 실인원 수도 2014년 8,962명에서 2023년 16,963명으로 약 1.9배(8,001명)로 증가하였고 HIV/AIDS 원인으로 인한 사망자 수는 해마다 감소하는 추세이며 이것은 감염인이 평소 ART를 통해 관리가 잘 이루어지면서 기대여명이 증가함에 따라 감염인이 더 오래 생존하고 있다는 의미로 보인다.

본 연구의 제한점으로, 건강보험통계의 경우 내·외국인, 재외국민을 포함한 건강보험가입자 기준으로 산출된 자료이고, 질병통계에 대한 자료는 요양기관에서 환자 진료 중 진단명이 확정되지 않은 상태에서 환자의 호소, 증세 등에 따라 일차 진단명을 부여하고 청구한 내역 중 주진단명 기준으로 발췌한 것이므로 실제 최종 확정된 질병과는 다를 수 있다. 따라서 질병관리청에서 수집하고 발표한 자료와는 다를 수 있다. 건강보험통계연보와 의료급여통계를 구분한 이유는 양 제도의 본인부담률이 크게 상이하므로 제도 간 의료급여비용 총액(총진료비), 기관부담금(기금부담금, 급여비) 등 용어 해석에 차이가 있고 급여실적 자료는 건강보험 통계연보는 수진연도(실제 진료받은 날짜) 기준이고, 의료급여통계연보는 심사평가원에서 지급결정 연월 기준으로 작성되었으므로 기준 시점에 차이가 있음에 유의해야 한다. 또한 OECD 통계는 2025년 7월 10일에 통계를 공표한 이후 OECD에서 일부 통계를 수정·보완하고 있으므로 자료의 추출 시점에 따라 이 원고의 수치와 동일하지 않을 수 있고 OECD 통계는 병원급 이상 의료기관 대상으로 작성된 자료이고 국가통계포털(KOSIS)에서는 의원, 보건의료원, 보건소, 조산원 등 요양기관을 모두 포함할 수치이므로 차이가 있다.

감염인의 고령화로 의료 이용량이나 의료비 지출 증가 등에 영향을 미치고 있고 여기에 따른 대비가 필요하다. 질병

관리청은 2024년 「제2차 후천성면역결핍증 예방관리대책(2024-2028년)」을 수립하였고, 2028년까지 HIV 신규 감염 발생 억제를 위한 예방강화와 조기 발견을 위한 검사 활성화 및 진단 체계 개선, 신속한 치료와 치료유지 지원, 생존 감염인의 삶의 질 향상과 낙인 해소를 위한 지원체계 구축 마련 등을 적극적으로 추진할 예정이다.

## Declarations

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

**Author Contributions:** Conceptualization: KUK. Data curation: KUK. Investigation: KUK. Methodology: KUK. Project administration: JHY. Supervision: JHY. Writing – original draft KUK. Writing – review & editing: SSC, JHH, JHY.

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## Surveillance Report

# HIV/AIDS Incidence, Treatment Status, and Mortality Statistics in the Republic of Korea, 2023

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**ABSTRACT**

**Objectives:** In this study, we aim to assess the current status of human immunodeficiency virus (HIV) infection, HIV/acquired immune deficiency syndrome (AIDS) treatment, and AIDS-related mortality to support national strategies for HIV/AIDS prevention and management in the Republic of Korea.

**Methods:** Statistics on HIV infection were analyzed using Integrated Disease Management System data, epidemiological surveys, health insurance and medical aid records, and national cause-of-death data.

**Results:** In 2023, 1,005 new HIV infections were reported, including 749 Koreans (74.5%) and 256 foreigners (25.5%). Among these cases, 903 (89.9%) occurred in males. Individuals in their 30s constituted the largest proportion, accounting for 35.4% (356 people) of newly reported infections. Among those infected, 99.6% (564 people) reported sexual contact as the transmission route. In total, 16,963 people received HIV-related treatment in 2023. Among hospitalized patients, the mean length of stay was 32.6 days—longer than for pneumonia (22.6 days) and tuberculosis (22.1 days). There were 45 AIDS-related deaths in 2023. The number of people living with HIV in 2023 reached 16,459, an increase of 591 from the previous year. The proportion of cases among older adults aged ≥60 years has risen annually, increasing from 16.4% in 2020 to 19.4% in 2023.

**Conclusions:** Strategic preparation is necessary to address the growing aging population living with HIV. Accordingly, the Korea Disease Control and Prevention Agency plans to implement strengthened policies under the 2nd National Action Plan on HIV/AIDS Prevention and Control (2024–2028) to reduce new infections, promote early detection, support timely treatment and adherence, protect the right to health, and enhance management capacity.

**Key words:** HIV; AIDS; Health care; Cause of death

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**Introduction**

Since the first domestic case of human immunodeficiency virus (HIV) infection was reported in the Republic of Korea (ROK) in 1985, more than 1,000 new infections have been

recorded annually. With remarkable advancements in antiretroviral therapy (ART) and improved access to treatment, HIV has become a manageable chronic disease, as a single daily pill can effectively suppress viral replication and restore immune function. Previously, ART was initiated in adults with severe or

### Key messages

#### ① What is known previously?

In the Republic of Korea (ROK), approximately 1,000 new HIV infections are reported annually.

#### ② What new information is presented?

Although individuals aged 20–39 years account for the highest proportion of new HIV infections in ROK, the number of people living with HIV aged  $\geq 60$  years has doubled over the past decade, reaching 2,106 people in 2023 compared with 2014, and continues to increase.

#### ③ What are implications?

Advances in antiretroviral therapy have improved outcomes and extended life expectancy among people living with HIV, contributing to an expanding aging population. The Korea Disease Control and Prevention Agency plans to implement policies to prevent new infections, enhance early detection, strengthen treatment adherence, ensure the right to health, and improve management systems, with a goal of reducing new infections by 50% by 2030 compared with 2023.

progressive HIV disease or in those with a CD4<sup>+</sup> T cell count of 350 cells/ $\mu$ l or less. However, in 2015, the World Health Organization recommended initiating ART immediately upon diagnosis, regardless of CD4<sup>+</sup> T cell count. This guideline review has been associated with reductions in mortality, severe HIV-related morbidity, and disease progression, as well as improvements in treatment adherence, linkage to initial care, immune recovery, and reductions in HIV transmission [1].

In 2023, an estimated 1.3 million new HIV infections occurred worldwide, and 630,000 individuals died from acquired immune deficiency syndrome (AIDS)-related causes—representing approximately a 50% reduction in AIDS-related deaths compared with 2010 [2]. Since 2004, the global

AIDS-related mortality rate has decreased by approximately 69%, and the rate of new infections has declined by approximately 39%. More than 30.7 million people are currently receiving ART, and approximately 77% of individuals with HIV are on treatment.

By comparing global HIV/AIDS trends with the domestic situation—including new HIV infections, treatment status, and causes of HIV/AIDS-related mortality—this study aims to generate evidence to inform national policy development.

## Methods

### 1. Status of HIV Infections and HIV/AIDS Medical Treatment

The reporting status of HIV/AIDS for 2023 was analyzed using data from confirmatory testing institutions, including the Korea Disease Control and Prevention Agency (KDCA) and the Health and Environment Research Institute. Positive HIV test results were reported through the Disease and Health Integrated Management System, in accordance with the reporting requirements outlined in the 「Prevention of Acquired Immunodeficiency Syndrome Act」. The analysis included sex, age, route of infection, and testing motivation.

The current status of HIV/AIDS treatment was examined using data from the National Health Insurance Service and the Health Insurance Review & Assessment Service, which jointly publish the Health Insurance Statistical Annual Report and the Medical Aid Statistical Yearbook. The Health Insurance Statistical Annual Report provides a wide range of statistical information—including health insurance coverage population, financial status, benefit expenditure, review performance, and disease statistics—derived from healthcare data collected

through the national health insurance system. The Medical Aid Statistical Yearbook includes information on medical aid recipients and institutions, benefit performance, review performance, and disease statistics. Using the Health Insurance Statistical Annual Report (based on patient visit dates) and the Medical Aid Statistical Yearbook (based on medical institution claim dates), the status of treatment for HIV disease (International Classification of Diseases 10th Revision [ICD-10] codes B20–B24) was analyzed to assess the current status of HIV/AIDS medical care [3,4].

## 2. Current Status of Medical Services Utilization<sup>1)</sup>

The Ministry of Health and Welfare publishes data on the utilization of medical services through the National Statistical Portal. These data include indicators such as the number of outpatient visits per capita—calculated by dividing the total annual number of outpatient visits by the total population—and the average length of hospital stay, calculated by dividing the total annual bed-days by the number of discharges. In this calculation, stays of less than 1 day, clinic visits, same-day admissions and discharges, and day-hospital services are excluded. The portal also provides information on the average length of stay per patient by diagnostic category [5,6].

## 3. Mortality Statistics

Ministry of Data and Statistics publishes annual mortality data for Korean nationals based on death reports and certificates submitted by local governments. In October 2024, the

2023 mortality data were released, including analyses of major causes of death and HIV/AIDS-related mortality (ICD-10 codes B20–B24) by year and age group [7].

## Results

### 1. Status of New HIV/AIDS Infections

In 2023, a total of 1,005 new HIV infections were reported, representing a 5.6% (60 individuals) decrease from the previous year. Among Korean nationals, new infections declined by 9.1% (75 individuals) to 749 (74.5%), whereas infections among foreign nationals increased by 6.2% (15 individuals) to 256. The proportion of foreigners in the total population increased from 22.6% in 2022 to 25.5% (Table 1) [8].

Overall, 89.9% (903 individuals) of newly reported infections occurred in males and 10.1% (102 individuals) in females. Among the 749 Korean nationals, 95.9% (718 individuals) were male, compared with 72.3% (185 individuals) among the 256 foreign nationals, indicating a notable difference in the male-to-female distribution. By age, individuals in their 30s accounted for the largest proportion at 35.4% (356 individuals), followed by those in their 20s at 28.7% (288 individuals) and those in their 40s at 15.7% (158 individuals). Collectively, individuals in their 20s and 30s comprised 64.1% of all new infections. Among newly infected Korean nationals who completed the epidemiological survey, 564 of 566 individuals (99.6%) reported sexual contact as the route of transmission. Among male infected individuals (540 individuals)

1) Current status of healthcare service utilization: The Ministry of Health and Welfare collects data on healthcare service utilization related to diseases and injuries and provides these statistics to both the National Statistical Portal (KOSIS) and international organizations, such as the Organisation for Economic Co-operation and Development (OECD). The National Statistical Portal provides nine inpatient indicators—such as the number of admissions and discharges by type of medical institution—and four outpatient indicators, including the number of outpatient visits by type of medical institution and region. The OECD Health Statistics database includes two outpatient indicators, such as the number of outpatient visits per capita to physicians and dentists, and 10 inpatient indicators, including the total number of hospital discharges, discharge rates, and the number and rate of discharges by diagnostic category.

**Table 1.** Demographic characteristics of notified HIV/AIDS cases (2014–2023)

Category	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total	1,191	1,151	1,196	1,190	1,206	1,223	1,013	973	1,065	1,005
Incidence rate per 100,000 people <sup>a)</sup>	2.3	2.3	2.3	2.3	2.4	2.4	2.0	1.9	2.1	2.0
Foreigner	110	133	137	182	218	217	197	203	241	256
Korean	1,081	1,018	1,059	1,008	988	1,006	816	770	824	749
People living with HIV	9,481	10,346	11,246	12,083	12,936	13,819	14,528	15,186	15,868	16,459
Sex										
Male	8,761 (92.4)	9,587 (92.7)	10,436 (92.8)	11,235 (93.0)	12,053 (93.2)	12,891 (93.3)	13,580 (93.5)	14,214 (93.6)	14,871 (93.7)	15,441 (93.8)
Female	720 (7.6)	759 (7.3)	810 (7.2)	848 (7.0)	883 (6.8)	928 (6.7)	948 (6.5)	972 (6.4)	997 (6.3)	1,018 (6.2)
Age (yr)										
0–9	2 (0.0)	2 (0.0)	2 (0.0)	2 (0.0)	1 (0.0)	1 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10–19	68 (0.7)	64 (0.6)	54 (0.5)	55 (0.5)	43 (0.3)	49 (0.4)	34 (0.2)	29 (0.2)	23 (0.1)	18 (0.1)
20–29	1,482 (15.6)	1,692 (16.4)	1,892 (16.8)	2,025 (16.8)	2,103 (16.3)	2,171 (15.7)	2,135 (14.7)	2,009 (13.2)	1,823 (11.5)	1,638 (10.0)
30–39	2,199 (23.2)	2,281 (22.0)	2,448 (21.8)	2,619 (21.7)	2,858 (22.1)	3,139 (22.7)	3,400 (23.4)	3,770 (24.8)	4,161 (26.2)	4,488 (27.3)
40–49	2,708 (28.6)	2,894 (28.0)	3,028 (26.9)	3,154 (26.1)	3,277 (25.3)	3,379 (24.5)	3,473 (23.9)	3,467 (22.8)	3,552 (22.4)	3,596 (21.8)
50–59	1,935 (20.4)	2,148 (20.8)	2,372 (21.1)	2,563 (21.2)	2,755 (21.3)	2,951 (21.4)	3,108 (21.4)	3,279 (21.6)	3,384 (21.3)	3,526 (21.4)
≥60	1,087 (11.5)	1,265 (12.2)	1,450 (12.9)	1,665 (13.8)	1,899 (14.7)	2,129 (15.4)	2,377 (16.4)	2,632 (17.3)	2,925 (18.4)	3,193 (19.4)

Unit: person (%). HIV/AIDS=human immunodeficiency virus/acquired immune deficiency syndrome. <sup>a)</sup>Mid-year population(Resident registration), Ministry of Data and Statistics. Reused from Korea Disease Control and Prevention Agency (2024) [8].

who reported sexual contact as the route of transmission, 56.7% (306 individuals) were infected through homosexual contact.

The number of surviving Korean patients with HIV reached 16,459 in 2023, an increase of 591 from the previous year. Of these, 93.8% (15,441 individuals) were male, and 6.2% (1,018 individuals) were female. By age group, 3,193 individuals (19.4%) were 60 years or older, and 13,266

individuals (80.6%) were under 60 years of age. The proportion of patients aged 60 years or older has increased annually: 16.4% in 2020, 17.3% in 2021, 18.4% in 2022, and 19.4% in 2023.

## 2. Current Status of HIV/AIDS Treatment

According to statistics published by the National Health Insurance Service, the number of individuals receiving

2) Actual number of people treated: The number of individuals treated in an outpatient setting refers to the number of patients among health insurance subscribers who received care during the year (January 1 to December 31). When calculating the number of patients by disease, month, or type of healthcare institution, duplicate counts may occur; therefore, the sum of subgroup counts may not match the total number of unique individuals treated.

treatment for HIV/AIDS (ICD-10 codes B20–B24)<sup>2)</sup>, including both health insurance subscribers and medical aid beneficiaries, was 8,962 in 2014. This number has steadily increased, reaching 16,963 in 2023. The annual out-of-pocket expense per health insurance subscriber was 993,792 KRW in 2014, decreasing to 888,439 KRW in 2023. Among medical aid beneficiaries, approximately 2,000 individuals receive treatment for HIV each year, and out-of-pocket expenses for HIV-related care are fully exempt. The annual institution-borne expense per medical aid beneficiary<sup>3)</sup> was 11,739 KRW in 2014, declining to 9,387 KRW in 2023 (Table 2).

### 3. Current Status of Medical Services Utilization

In 2023, the average number of outpatient visits per person to doctors in the country was 18.0 per year, the highest among OECD member states. The average length of hospital stay<sup>4)</sup> per patient was 17.5 days, ranking second among OECD countries after Japan (26.3 days) and exceeding twice the OECD average of 8.1 days. Published data by diagnostic category include a broad range of conditions, such as infectious diseases,

neoplasms, blood disorders, endocrine disorders, mental and behavioral disorders, neurological conditions, eye and ear diseases, and diseases of the circulatory, respiratory, digestive, skin, musculoskeletal, and genitourinary systems, as well as conditions related to pregnancy and childbirth, injuries, poisoning, external causes, and emerging diseases. Among these categories, statistics for specific infectious and parasitic diseases (A00–B99) indicate that in 2023, the longest average hospital stay occurred in cases of sepsis (A40–A41) at 119.9 days, followed by HIV-related diseases (B20–B24) at 32.6 days—longer than that for pneumonia (J12–J18; 22.6 days) and tuberculosis (A15–A19; 22.1 days) [6].

### 4. Mortality Statistics

In 2023, a total of 352,511 deaths occurred in ROK, representing a 5.5% decrease (20,428 fewer deaths) compared with the previous year. Cancer, heart disease, and pneumonia accounted for 41.9% of all deaths. Among specific infectious and parasitic diseases (A00–B99), coronavirus disease 2019 (COVID-19) caused 7,442 deaths (14.6 per 100,000

**Table 2.** HIV/AIDS treatment status by medical security

Category	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Patients	8,962	9,883	10,905	11,877	13,412	13,070	14,525	15,352	16,188	16,963	
Per 100,000 people <sup>a)</sup>	177	194	213	232	261	255	28.3	29.9	31.6	33.2	
Cost per person	Total	1,005,531	1,022,905	1,040,260	1,060,249	1,038,837	1,018,581	986,832	950,222	910,524	897,826
	National Health Insurance	993,792	1,011,923	1,029,208	1,049,231	1,030,365	1,002,960	976,311	940,533	901,522	888,439
	Medical Aid <sup>b)</sup>	11,739	10,982	11,052	11,018	8,472	15,621	10,521	9,689	9,001	9,387

Unit: person, won. HIV/AIDS=human immunodeficiency virus/acquired immune deficiency syndrome. <sup>a)</sup>Mid-year population (resident registration), Ministry of Data and Statistics. <sup>b)</sup>Institutional contribution. Reused from Health Insurance Review and Assessment Service, National Health Insurance Service (2024) [3,4].

3) Institutional burden: The institutional burden refers to the portion of medical expenses covered by the Medical Service Fund, excluding the patient's personal share as stipulated by the Medical Service Act, from the total approved medical expenditure.

4) Average length of hospital stay: The average length of hospital stay is calculated by dividing the total annual number of bed-days by the number of discharges. This calculation excludes cases with bed-days of less than 1 day, clinic visits, same-day admissions and discharges, and day hospital services.

population), falling from the third leading cause of death in 2022 to the 10th in 2023. Tuberculosis (A15–A19) accounted for 1,331 deaths (2.6 per 100,000 population), ranking 15th, while HIV/AIDS (B20–B24) caused 45 deaths (0.1 per 100,000 population), remaining comparatively low.

Deaths caused by HIV/AIDS peaked at 124 in 2011 and have continued to decline each year since. In the 1990s, most deaths occurred among individuals in their 30s. From 2005

to 2012, the highest number of deaths occurred among those in their 40s, whereas since 2013, individuals in their 50s have accounted for the largest proportion of HIV/AIDS-related deaths. In comparison, COVID-19-related mortality was most prevalent among individuals aged 60 years or older, while tuberculosis-related deaths were highest among those aged 80 years or older (Table 3).

**Table 3.** Death statistics by infectious disease

Category	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>HIV</b>										
Total	121	104	88	91	85	76	54	64	54	45
Incidence rate per 100,000 people <sup>a)</sup>	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
<b>Sex</b>										
Male	106 (87.6)	100 (96.2)	82 (93.2)	83 (91.2)	79 (92.9)	70 (92.1)	51 (94.4)	61 (95.3)	48 (88.9)	41 (91.1)
Female	15 (12.4)	4 (3.8)	6 (6.8)	8 (8.8)	6 (7.1)	6 (7.9)	3 (5.6)	3 (4.7)	6 (11.1)	4 (8.9)
<b>Age (yr)</b>										
0–9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10–19	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
20–29	4 (3.3)	3 (2.9)	4 (4.5)	1 (1.1)	2 (2.4)	1 (1.3)	1 (1.9)	2 (3.1)	0 (0.0)	2 (4.4)
30–39	12 (9.9)	9 (8.7)	8 (9.1)	6 (6.6)	7 (8.2)	9 (11.8)	4 (7.4)	4 (6.3)	8 (14.8)	9 (20.0)
40–49	29 (24.0)	22 (21.2)	15 (17.0)	24 (26.4)	20 (23.5)	14 (18.4)	9 (16.7)	14 (21.9)	7 (13.0)	6 (13.3)
50–59	35 (28.9)	29 (27.9)	30 (34.1)	30 (33.0)	20 (23.5)	22 (28.9)	19 (35.2)	22 (34.4)	17 (31.5)	10 (22.2)
60–69	26 (21.5)	22 (21.2)	16 (18.2)	13 (14.3)	19 (22.4)	14 (18.4)	10 (18.5)	13 (20.3)	12 (22.2)	10 (22.2)
≥70	15 (12.4)	19 (18.3)	15 (17.0)	17 (18.7)	17 (20.0)	16 (21.1)	11 (20.4)	9 (14.1)	10 (18.5)	8 (17.8)
Pneumonia	12,021	14,718	16,476	19,378	23,280	23,168	22,257	22,812	26,710	29,422
COVID-19 <sup>b)</sup>	-	-	-	-	-	-	950	5,030	31,280	7,442
Tuberculosis <sup>c)</sup>	2,305	2,209	2,186	1,816	1,800	1,610	1,356	1,430	1,322	1,331
Viral hepatitis	720	667	628	548	584	649	536	493	447	459

Unit: person (%) or person only. HIV=human immunodeficiency virus; COVID-19=coronavirus disease 2019. <sup>a)</sup>Mid-year population (resident registration), Ministry of Data and Statistics. <sup>b)</sup>COVID-19 (U07.1, U07.2, U10). <sup>c)</sup>Respiratory tuberculosis (A15–A16), other tuberculosis (A17–A19). Reused from Ministry of Statics Korea Press release (2024) [7].

## Discussion

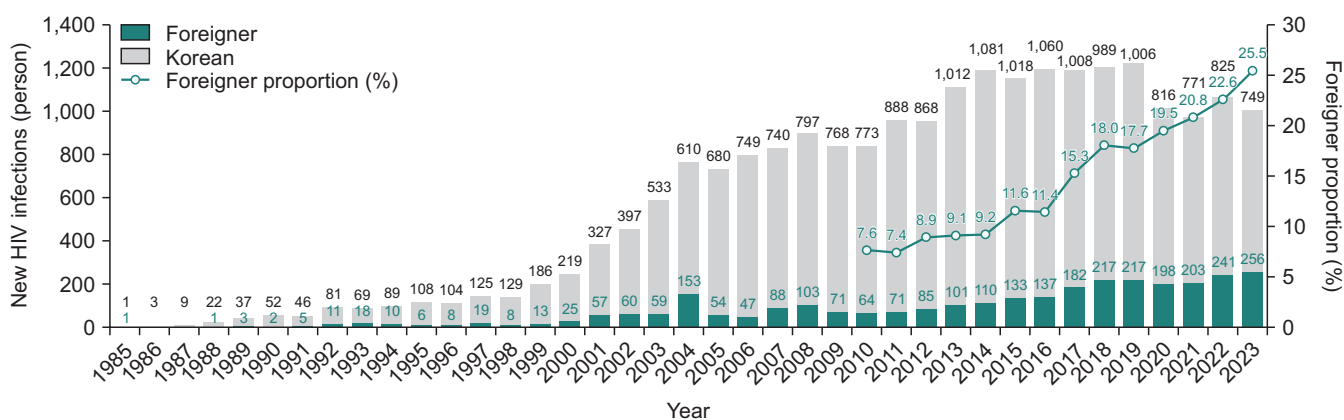
In 2023, a total of 1,005 HIV infections were reported, of which 749 cases (74.5%) occurred among Korean nationals and 256 cases (25.5%) among foreign nationals. Males accounted for 903 cases (89.9%). The proportion of new infections among foreign nationals has shown a steady upward trend, increasing from 20.7% in 2021 to 22.6% in 2022 (Figure 1).

The number of surviving Korean individuals living with HIV was 16,459 in 2023 (32.2 per 100,000 population), marking a 3.7% increase (591 individuals) from the previous year. New infections continued to occur most frequently among individuals in their 20s and 30s, and those in their 30s represented the largest proportion of people currently living with HIV. Notably, the proportion of individuals aged 60 years or older has been steadily increasing, rising from 17.3% in 2021 to 18.4% in 2022 and 19.4% in 2023.

In 2023, ROK recorded 18.0 outpatient doctor visits per person, the highest among OECD countries. This rate is approximately 2.8 times higher than the OECD average of 6.5 visits, suggesting that Koreans generally have favorable

perceptions of medical services and tend to utilize them frequently [9]. The average length of hospital stay for HIV-related diseases, based on OECD disease classifications, was 33 days, longer than that for pneumonia (28 days) and tuberculosis (22 days). These findings indicate that when individuals with HIV are hospitalized, their hospital stays tend to be prolonged, extending treatment duration and contributing to greater economic burdens. Therefore, continuous ART is essential to prevent complications and disease progression. In mortality statistics, the persistently high number of HIV-related deaths among individuals in their 50s since 2013 is largely attributable to late diagnosis of HIV infection. Many individuals are diagnosed only after significant disease progression to advanced-stage AIDS, thereby missing the optimal treatment window and resulting in increased mortality [10].

Advances in medical technology have improved early diagnostic accuracy, and the development of diverse ART regimens has expanded treatment options, increasing the number of patients eligible for therapy. In ROK, the annual treatment cost per person decreased to approximately 890,000 KRW in 2023. However, as the life expectancy of individuals living with HIV increases, the incidence of age-related chronic



**Figure 1.** Annual trends in new HIV infections  
HIV=human immunodeficiency virus.

conditions is expected to rise. In the United States, although mortality from AIDS and opportunistic infections has declined, the incidence of liver diseases (often associated with viral hepatitis co-infection), hyperlipidemia, diabetes mellitus, cardiovascular disease, and osteopenia has increased. Notably, cardiovascular diseases have become the third leading cause of death or hospitalization among long-term survivors [11]. In ROK, improvements in access to care have been facilitated by expanded health insurance coverage for individuals with infectious diseases (including the application of special 10% co-payment rates since 2009), enhanced medical aid benefits (exemption from out-of-pocket expenses for HIV-related medical services), and further reductions in out-of-pocket costs to 10% through health center support (funded jointly by national and local governments). Additionally, post-payment collaboration with medical institutions has increased the accessibility and convenience of medical services.

According to the mortality statistics from Ministry of Data and Statistics, deaths due to HIV/AIDS peaked at 124 in 2011 and have decreased steadily, reaching 45 in 2023. Each year, the age distribution of deceased individuals shifted toward older age groups. Although the highest proportion of new HIV infections continues to occur among individuals in their 20s and 30s, the number of people aged 60 years or older living with HIV has doubled to 2,106 in 2023 compared with 2014. The number of patients receiving treatment increased from 8,962 in 2014 to 16,963 in 2023—an approximately 1.9-fold increase (8,001 additional individuals). Meanwhile, HIV/AIDS-related mortality has shown a consistent annual decline. These trends suggest that as individuals living with HIV maintain viral suppression through adherence to ART, their life expectancy improves, enabling them to live longer.

This study has some limitations. First, the health insurance statistics used are based on data compiled according to eligibility criteria for health insurance subscribers, which include Korean nationals, foreign residents, and Koreans residing abroad. Second, disease statistics are derived from the primary diagnosis recorded in insurance claims, which is assigned based on the patient's presenting symptoms—even when the final diagnosis has not yet been confirmed. Thus, these diagnoses may not fully correspond to the patient's definitive clinical diagnosis. Consequently, the results may differ from the surveillance statistics collected and reported by the KDCA.

Furthermore, this study distinguishes between the Health Insurance Statistical Yearbook and the Medical Aid Statistical Yearbook because the two systems have markedly different cost-sharing structures, affecting the interpretation of terms such as total medical care assistance costs (total medical expenditures) and institutional contributions (fund contributions or benefits). Notably, the basis for benefit data also differs: the Health Insurance Statistical Yearbook is organized by the year of service use (actual treatment dates), whereas the Medical Aid Statistical Yearbook is based on the year and month of payment decisions made by the Health Insurance Review & Assessment Service, leading to differences in reporting reference points. In addition, because the OECD revised and updated certain statistics after their initial publication on July 10, 2025, the figures cited in this report may vary depending on the extraction date. OECD statistics are based on data from hospital-level and higher medical institutions, whereas KOSIS includes all healthcare facilities, including clinics, public health centers, and maternity centers, which may result in discrepancies between the two sources.

The aging of individuals with HIV infections is influencing

patterns of healthcare utilization and related expenditures, underscoring the need for appropriate preparation. In response, the KDCA has established the “2nd National Action Plan on HIV/AIDS Prevention and Control (2024–2028)” for 2024. By 2028, the plan aims to strengthen prevention strategies to reduce new HIV infections, expand testing for early detection, improve diagnostic systems, support rapid initiation and sustained adherence to treatment, and develop comprehensive support systems to enhance the quality of life and reduce stigma among people living with HIV.

## Declarations

**Ethics Statement:** Not applicable.

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

**Author Contributions:** Conceptualization: KUK. Data curation: KUK. Investigation: KUK. Methodology: KUK. Project administration: JHY. Supervision: JHY. Writing – original draft KUK. Writing – review & editing: SSC, JHH, JHY.

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