Closing the Gap in Health Equity: Experience from Sistan & Blouchestan Province

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Zahedan University of Medical Sciences
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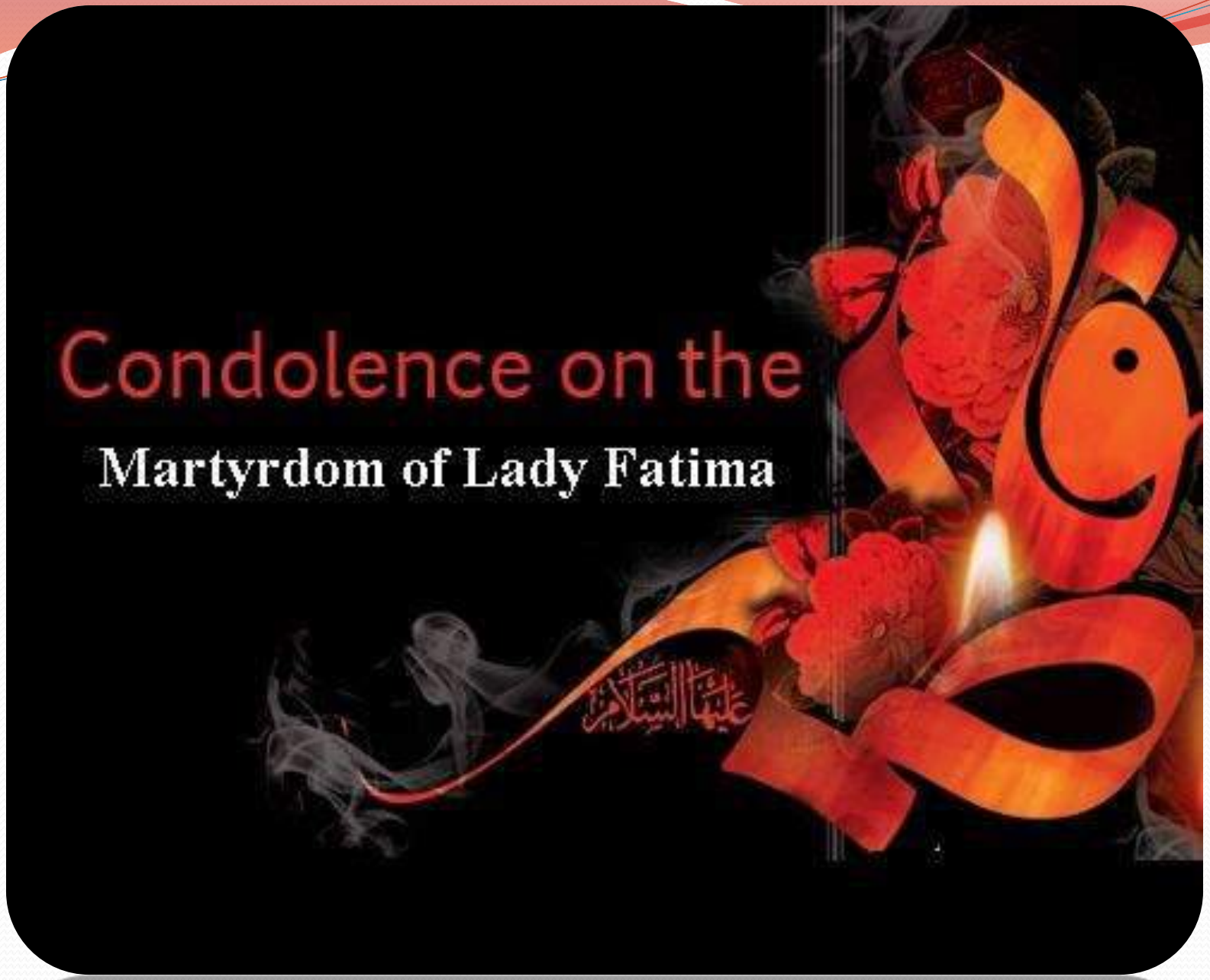
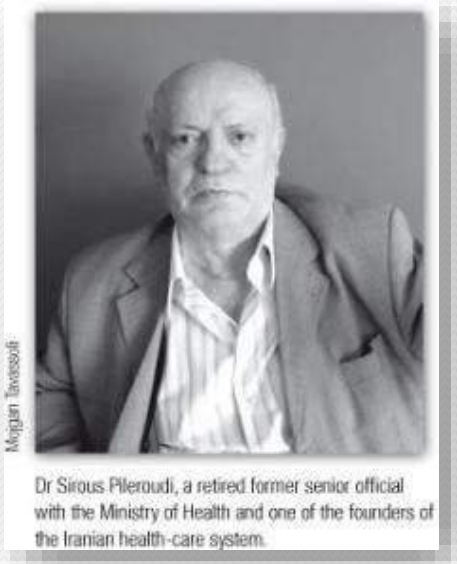

Condolence on the
Martyrdom of Lady Fatima

A Celebration of more than 40 Years of Public Health in Iran



Dr Sirous Pileroudi, a retired former senior official with the Ministry of Health and one of the founders of the Iranian health-care system.

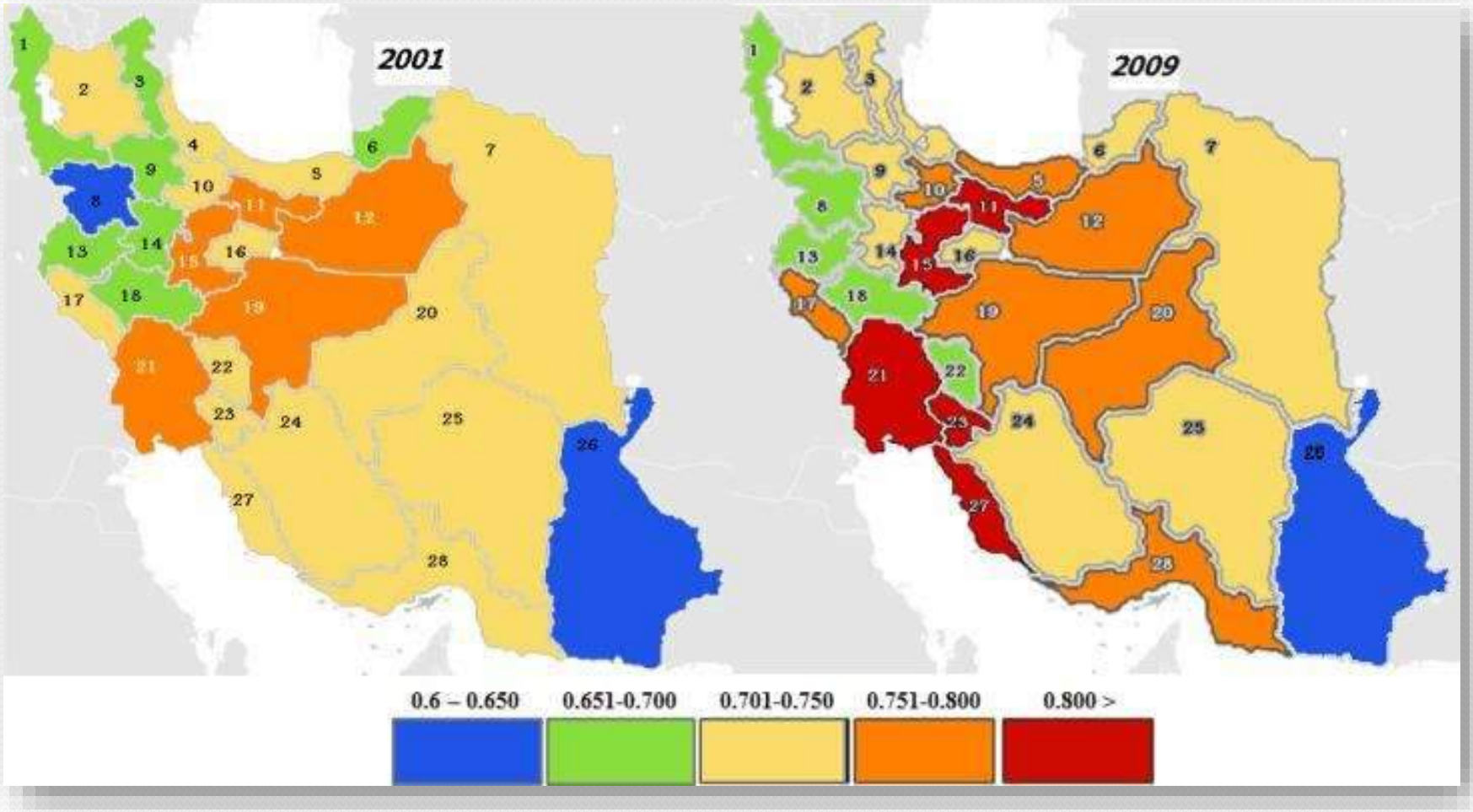
Presentation outline

- Socioeconomic status of Sistan & Blouchestan Province
- Health System infrastructure
- Health Care System Achievements
- Challenges and the way forward

Public Health Challenges in Sistan & Balouchestan Province

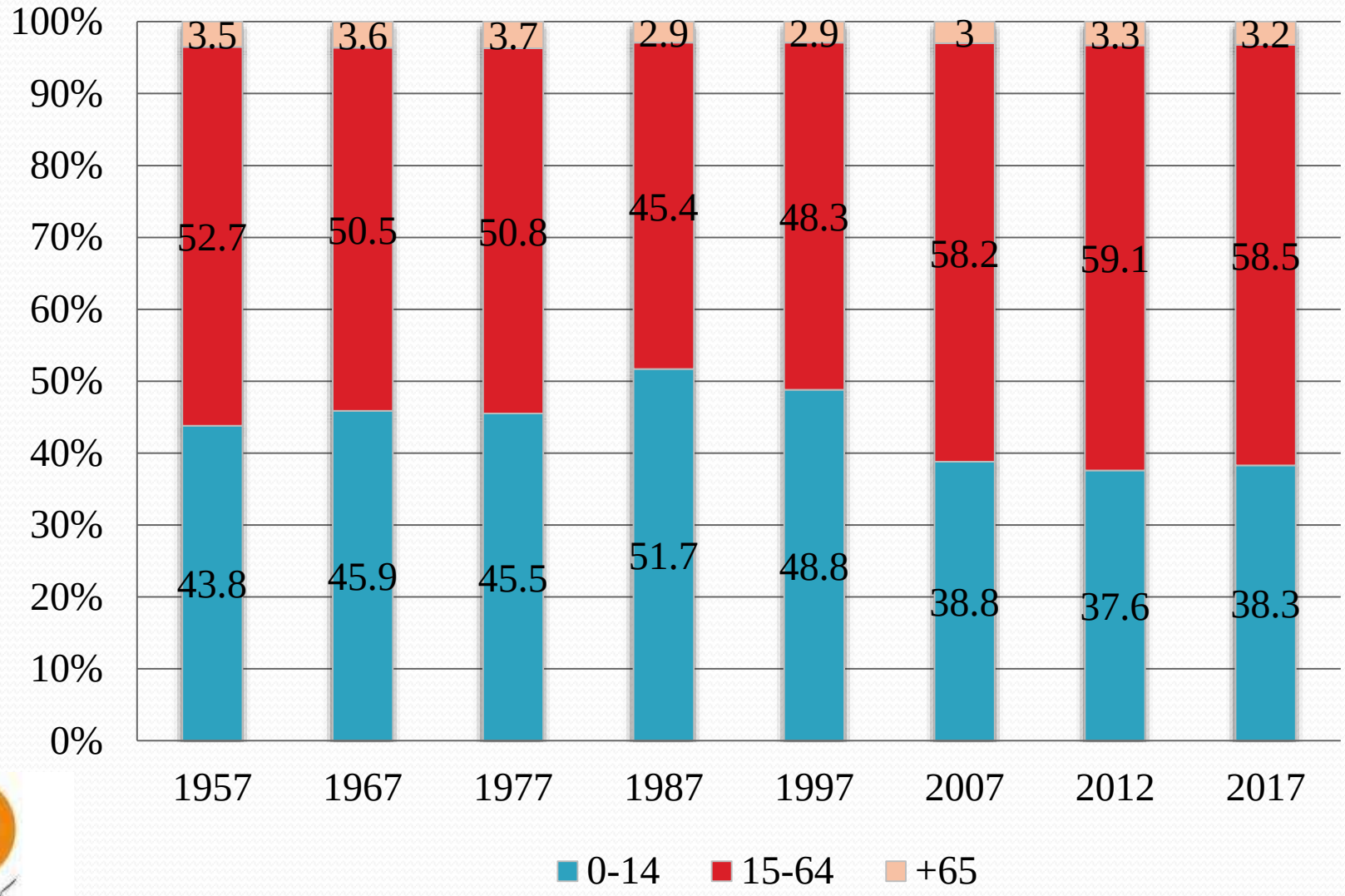
- Scattered population: **12 persons/ km^2**
- Underprivileged population: relatively low Socio-economic status of the province population (low-income, high illiteracy, malnutrition, limited access to air conditioner, diverse nationality…)
- **Climate:** Semi arid/ tropical
- The long common border with neighboring countries (1580 km) and resulting cross border population movements
- At risk of imported emerging & re-emerging diseases (especially dengue fever)
- Prone to outbreaks of vaccine-preventable diseases, particularly measles
- Route to drug and human trafficking , and smuggling fuel
- Prone to natural disasters including floods, earthquakes, typhoons,
- Man-made disasters, terrorist attacks

Human Development Index (HDI) across provinces in Iran, 2001 and 2009



Iran J Public Health. 2013; 42(2): 149–157.

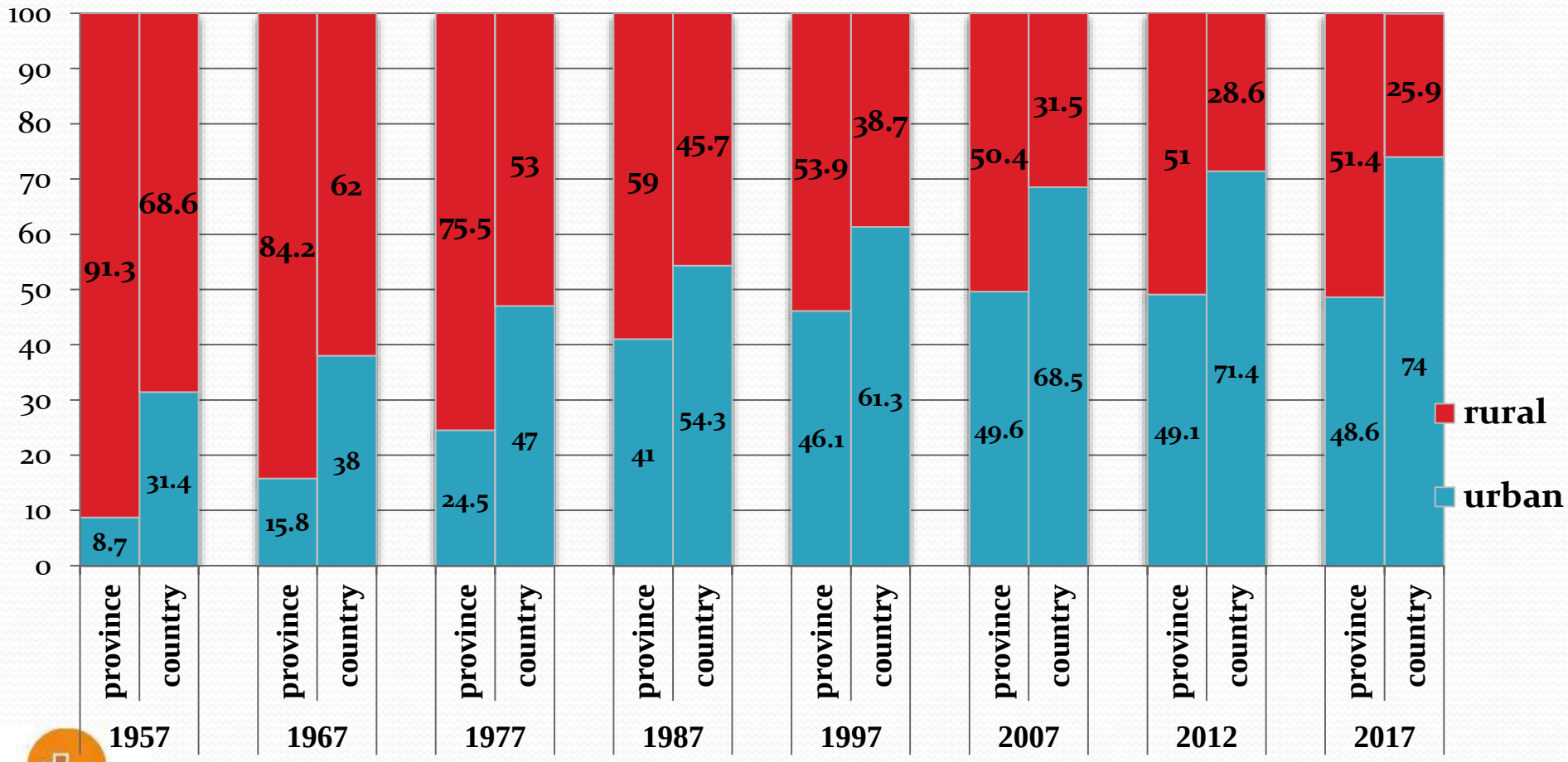
Demographic transition in Sistan & Baluchestan Province, 1957- 2017



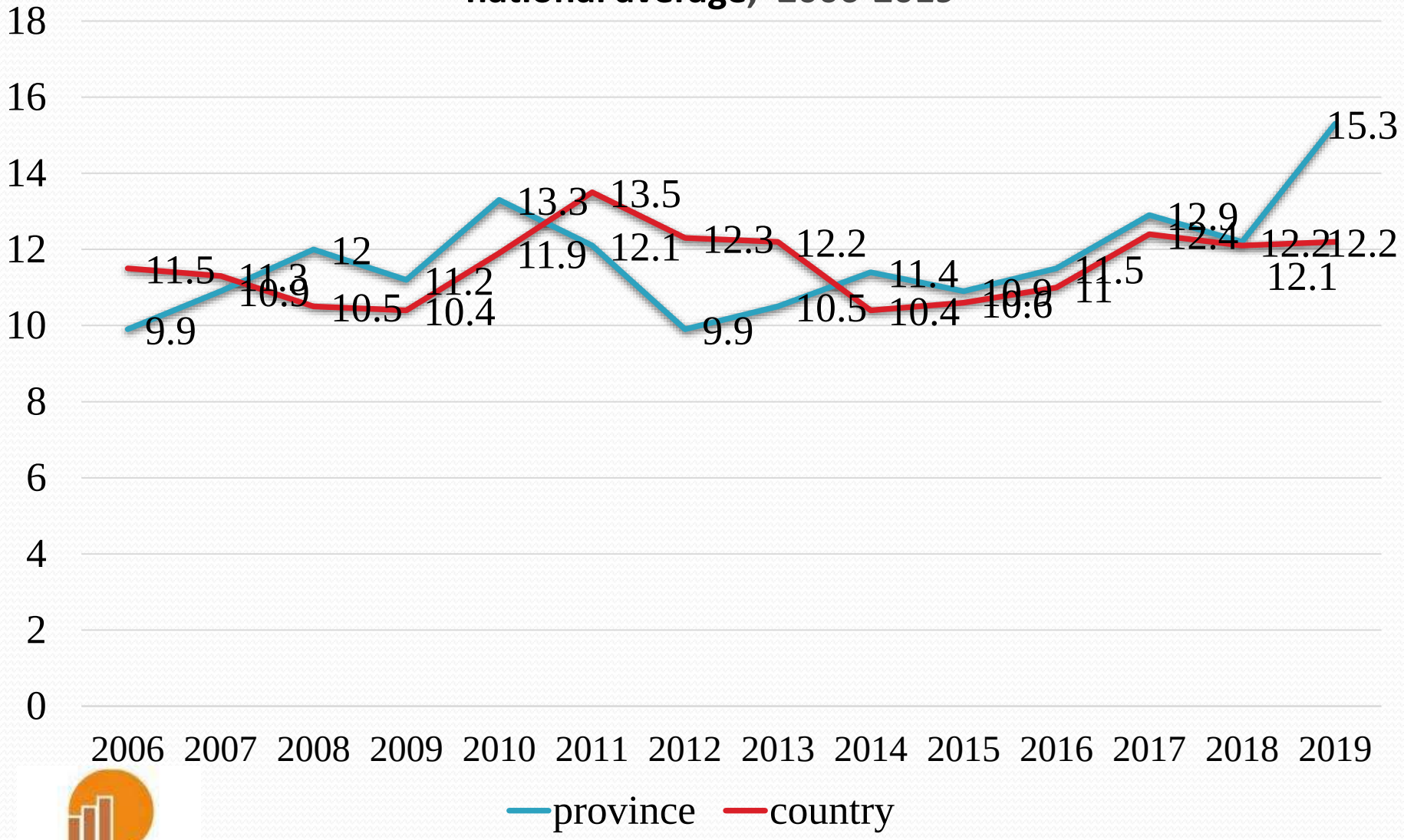
The trend of total fertility rate (TFR) in Sistan & Balouchestan province as compared with national figures-1993-2017

The youngest province in the country!

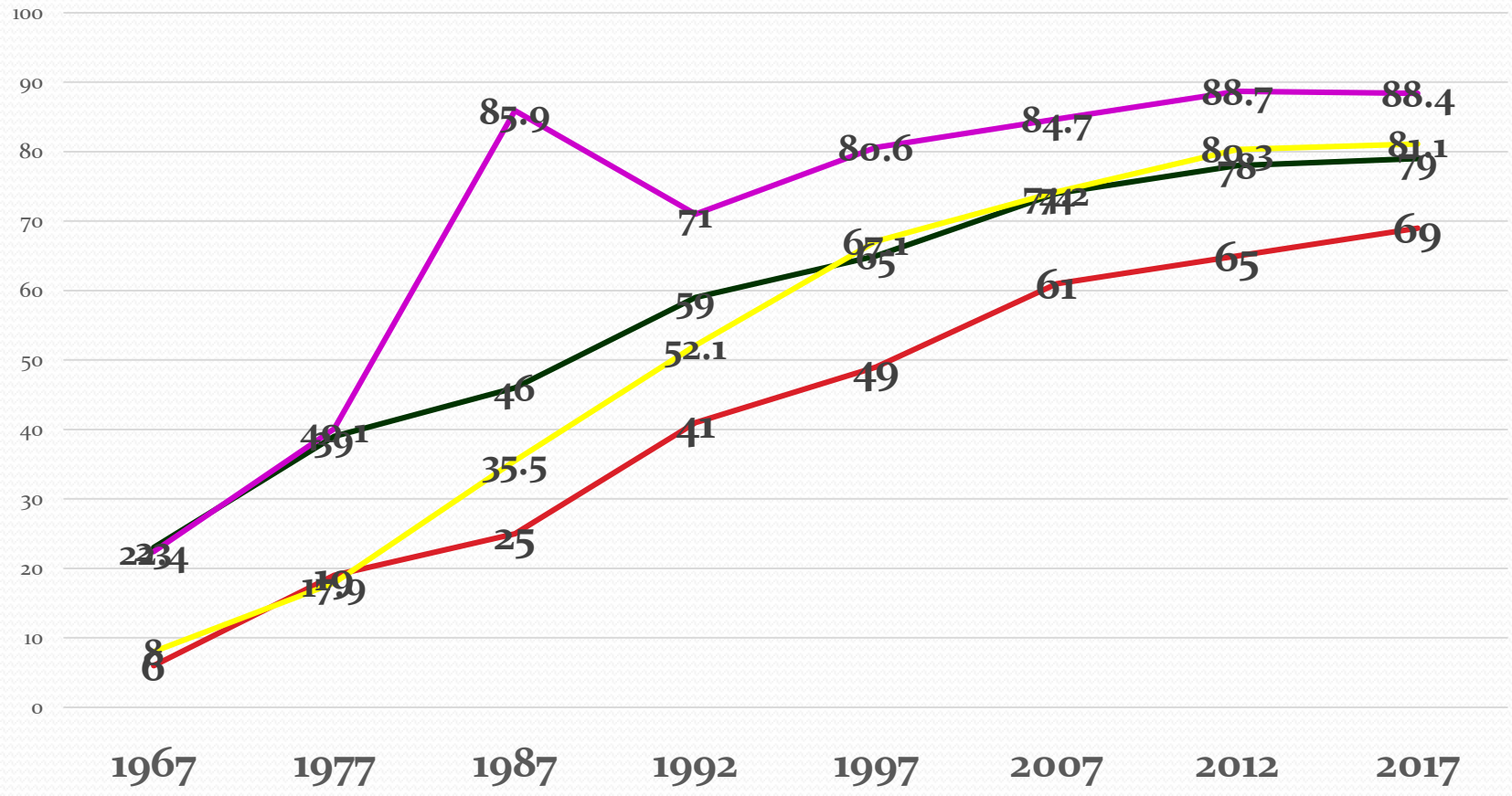
The proportion of the urban and rural population in Sistan and Baluchestan Province and Iran, 1957-2017



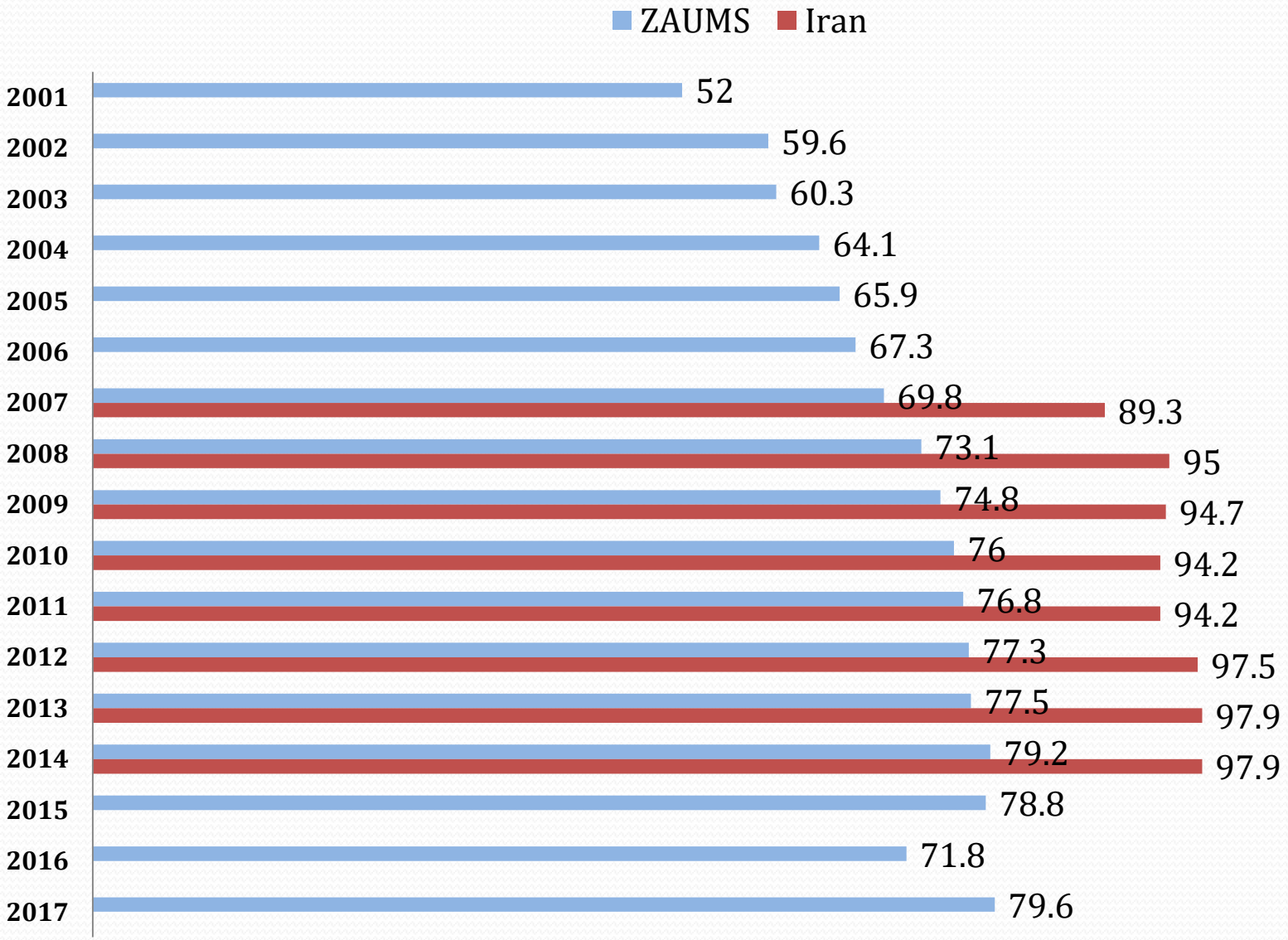
Unemployment rate in Sistan and Baluchestan Province in comparison with national average, 2006-2019



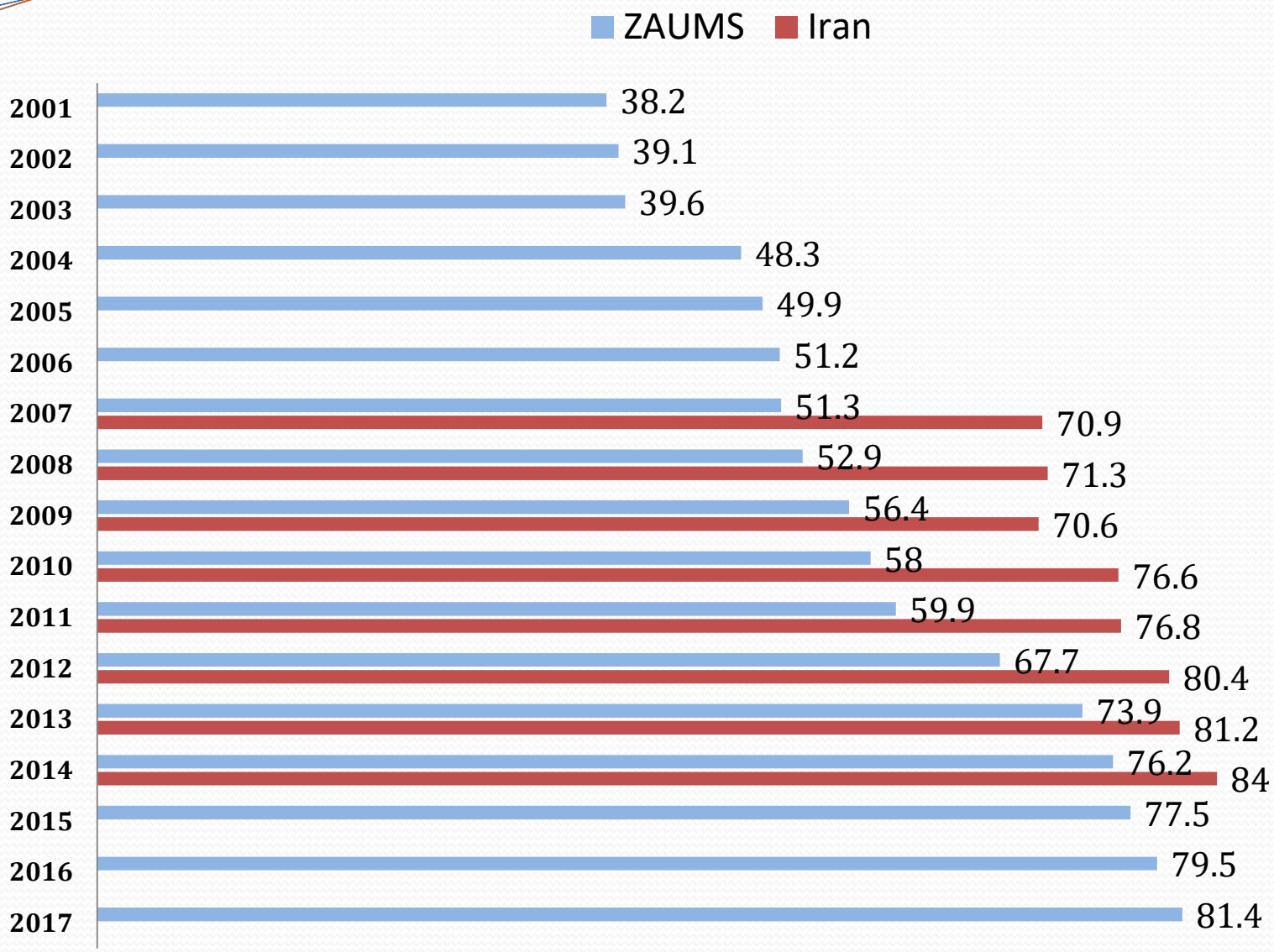
Comparison of literacy rates in Sistan and Baluchestan Province with the average national figures by gender, 2017-2017



The proportion of the ZAUMS rural households with access to safe drinking water, 2017



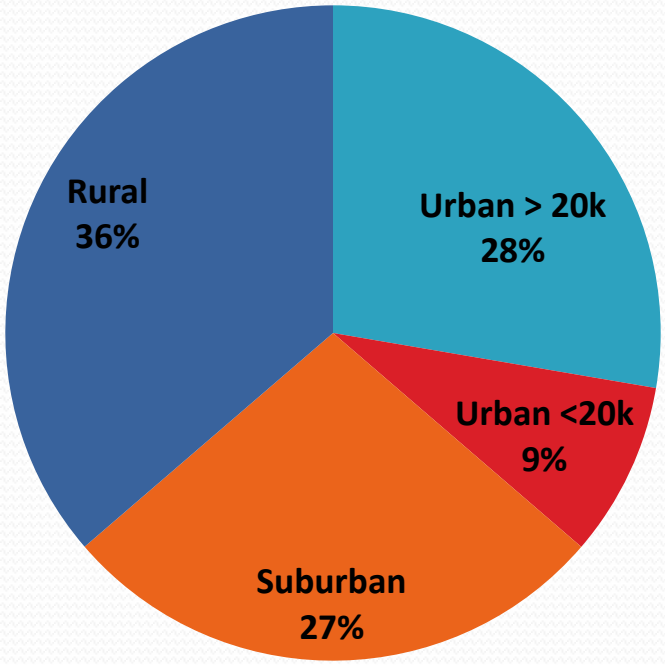
The proportion of the ZAUMS rural population using basic sanitation services, 2017



Health System Infrastructure in ZAUMS

ZAHEDAN UNIVERSITY OF MEDICAL SCIENCES

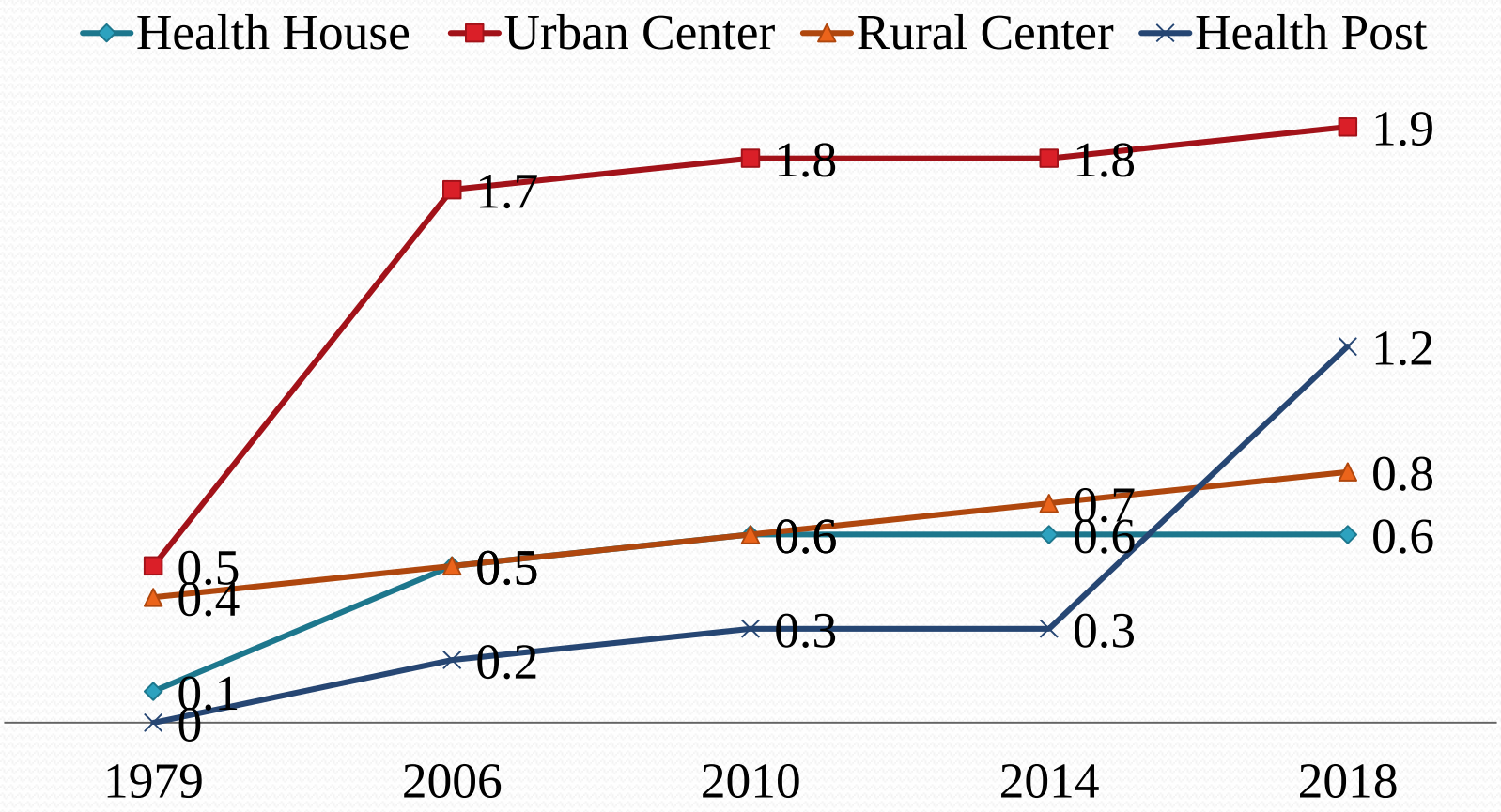
- **Established:** 1986
- **Districts:** Zahedan, Khash, Saravan, Sib &Suran, Mirjaveh
- **Population:** 1211511



The coverage of health care facilities in Zahedan University of Medical Sciences

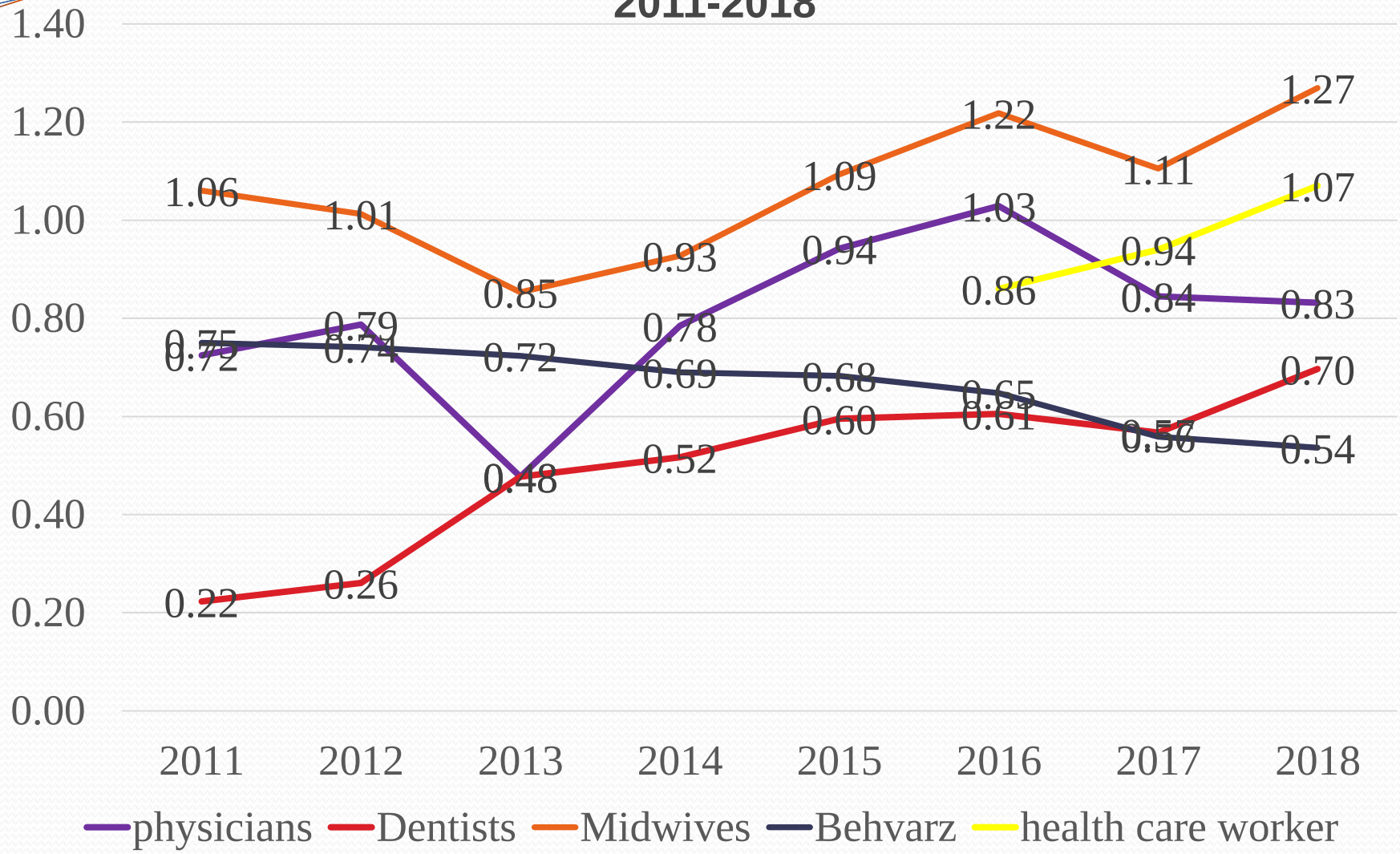
Health care facility	Planned	Active	Coverage (%)
Comprehensive Urban Health Center	48	48	100
Comprehensive Rural Health Center	82	71	87
Health Posts	93	92	9 9
Health Houses	451	397	88
Safe Delivery Facilities	17	17	100
Border Surveillance Health Post	6	5	83

The coverage of health care facilities in the Zahedan University of Medical Sciences based on PHC network development protocols



- Comprehensive Urban Health Centers per 37,500 people
- Comprehensive Rural Health Centers per 8,000 people
- Health Houses per 1,000 people
- Health Posts per 12,500 people

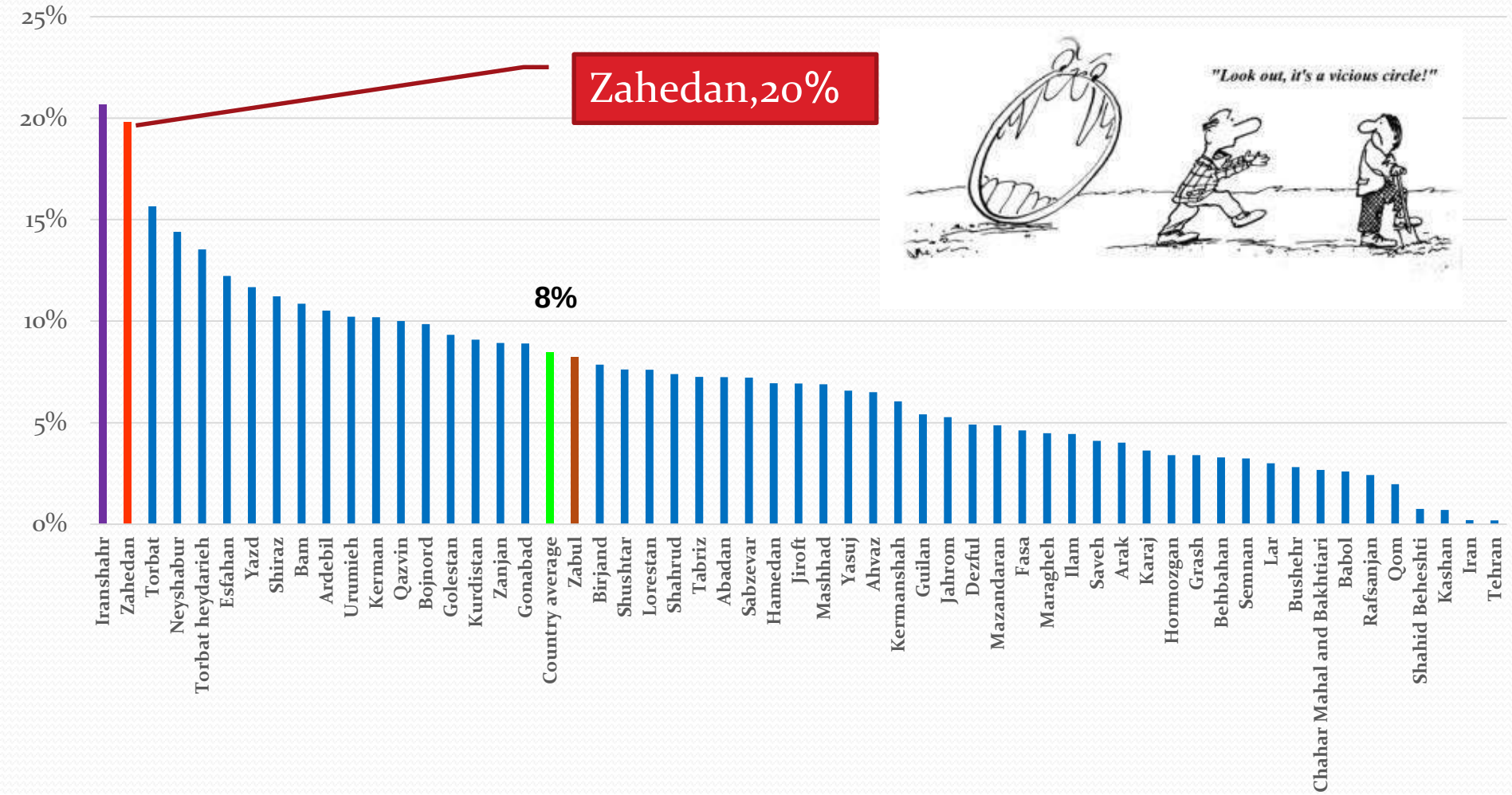
The health professionals in Zahedan University of Medical Sciences, 2011-2018



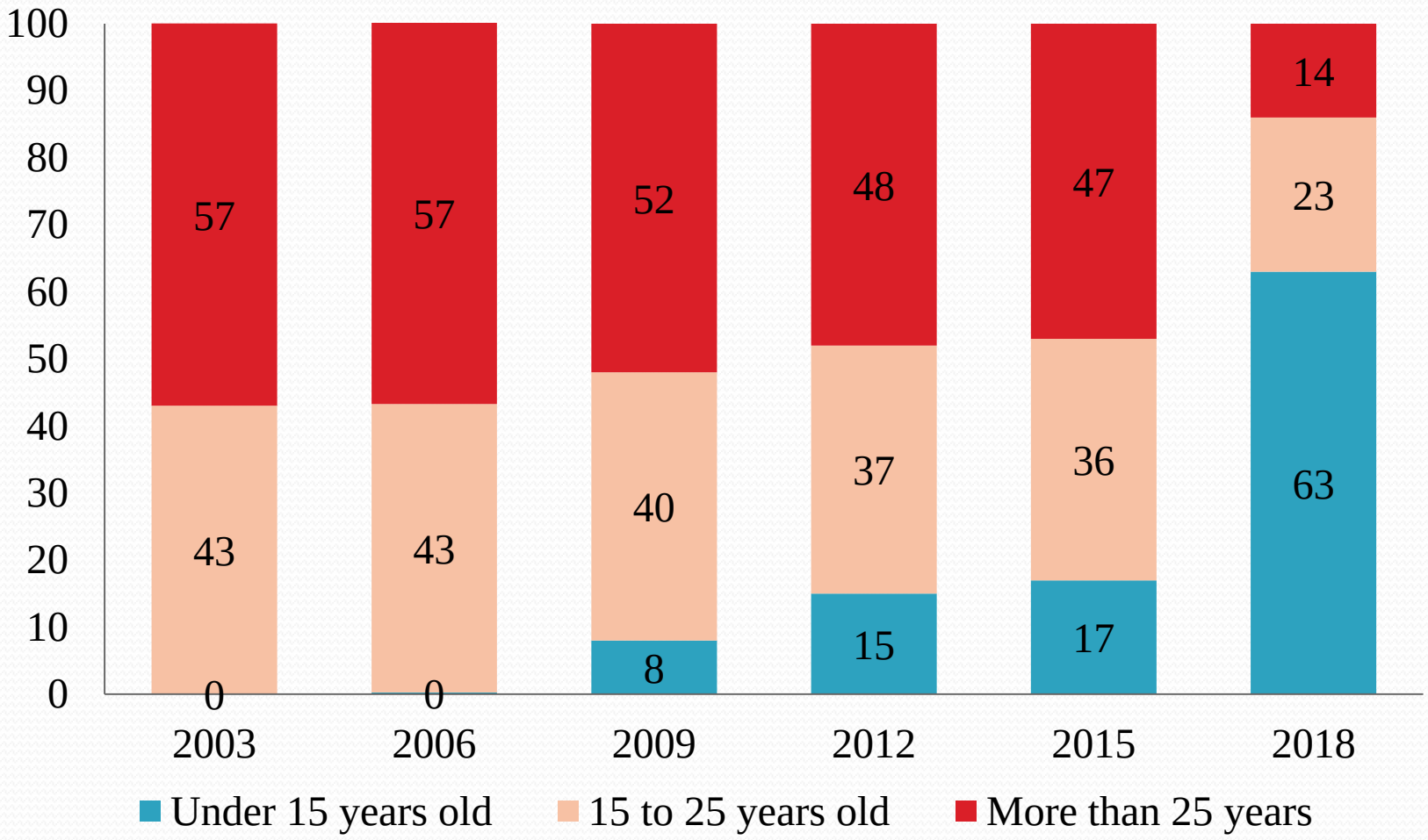
Physicians per 4000 pop
Dentists per 15000 pop

Midwives per 7000 pop
Two Behvarz per 1200 pop
Health care worker per 2500 pop

The percentage of rural family physician budget deductions, 2017

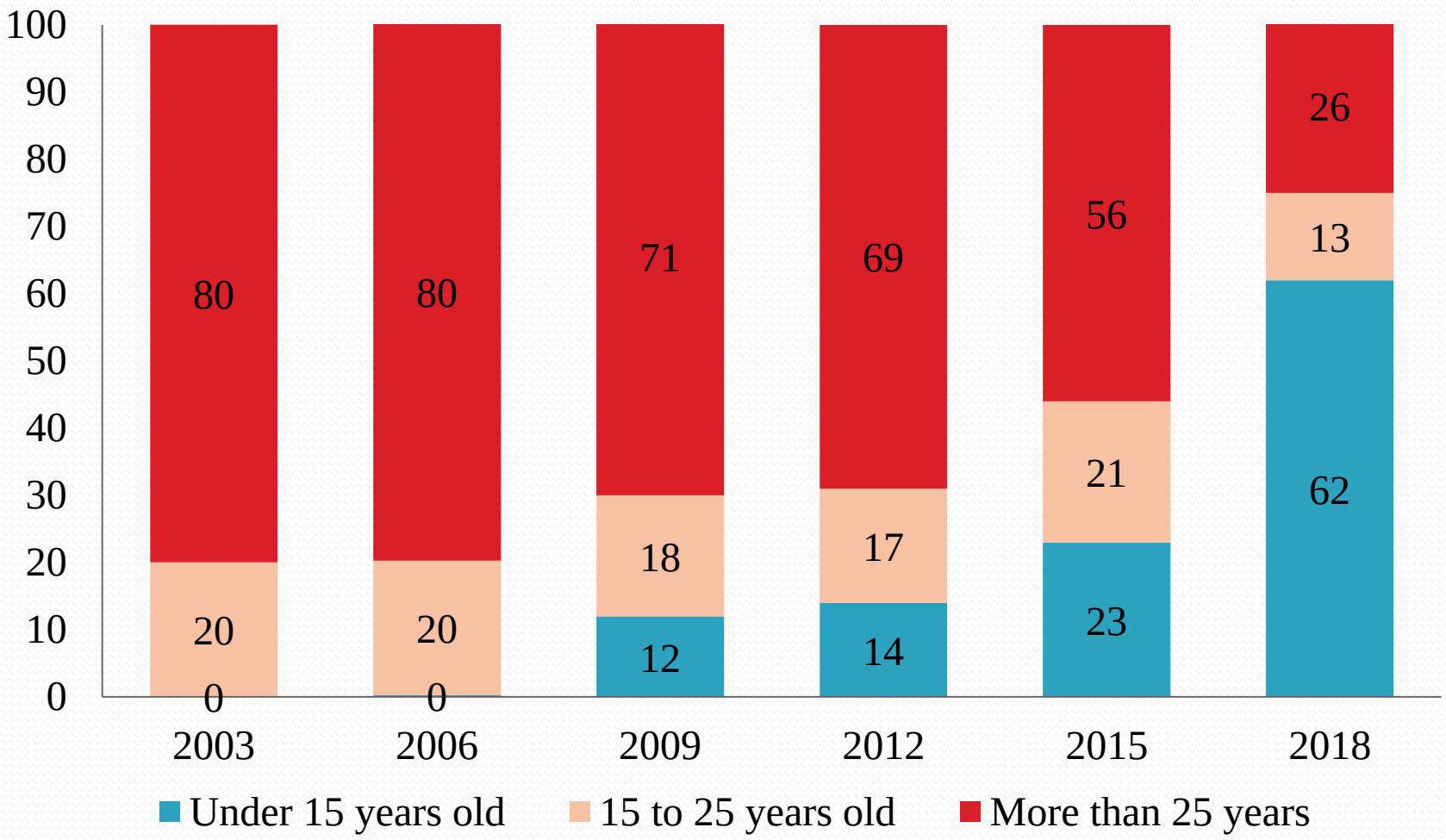


The percentage of Rural Health Centers based on the age of the buildings

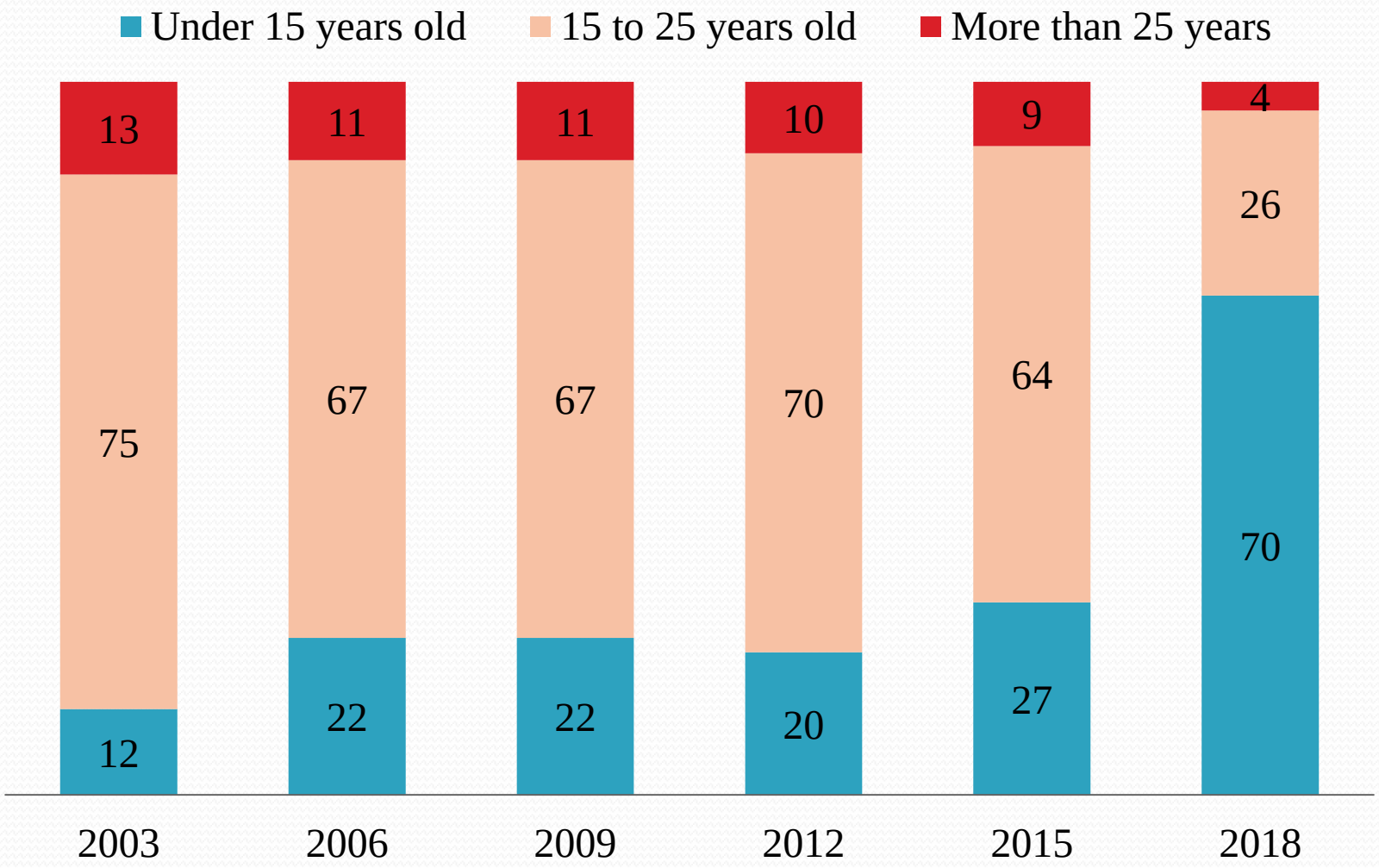


Newly constructed Health Centers

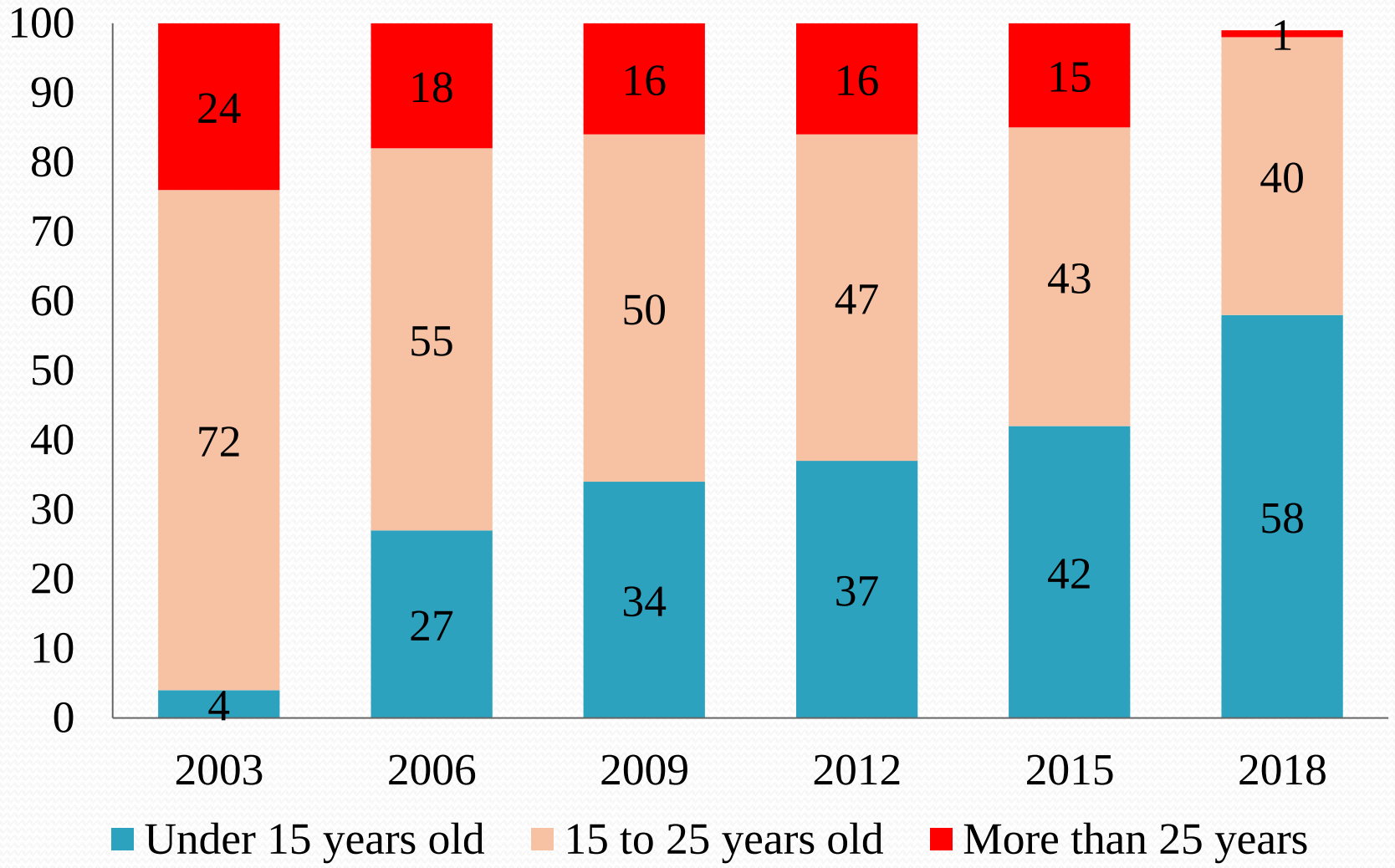
The percentage of Urban Health Center based on the age of the buildings



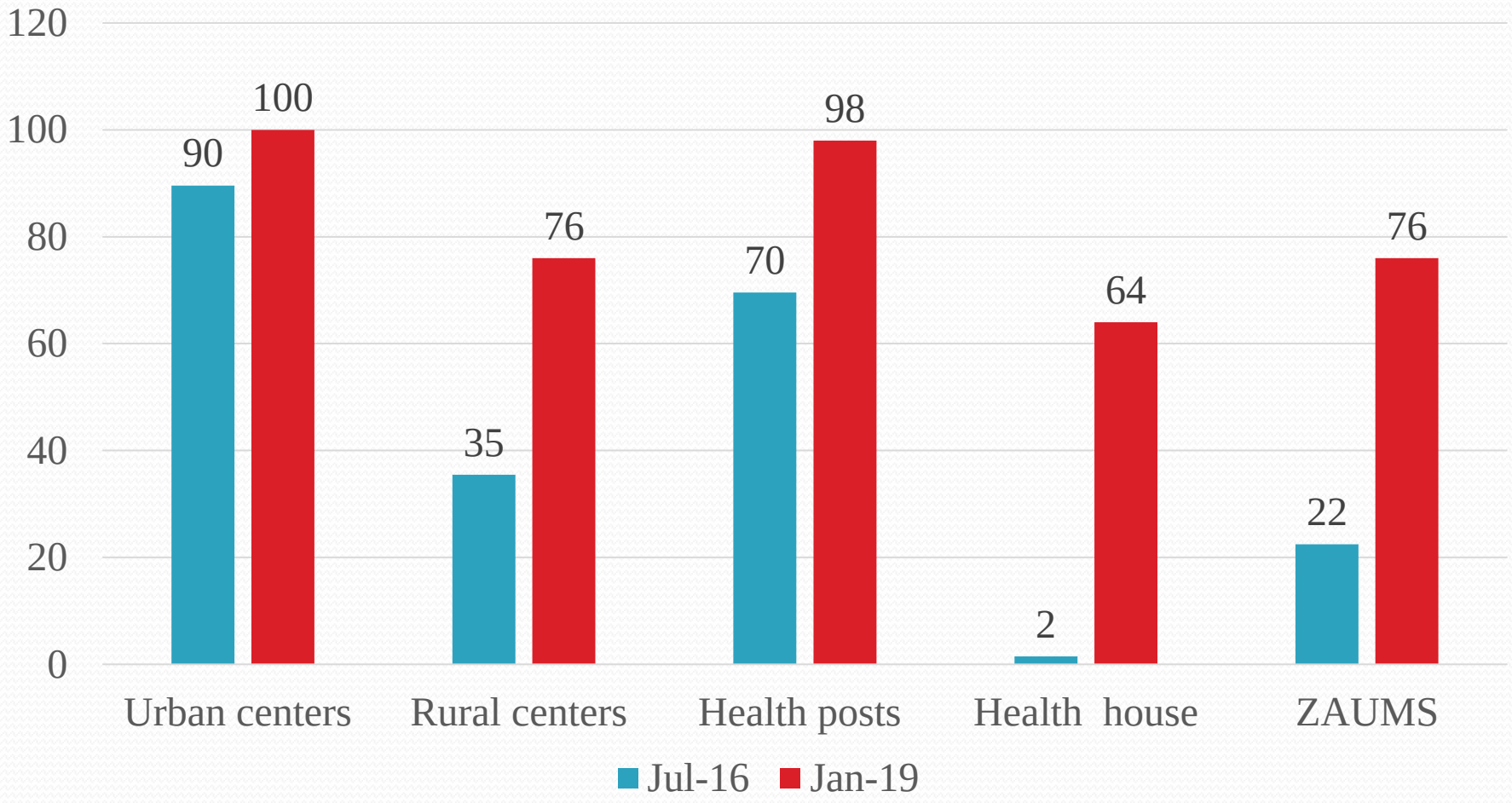
The percentage of Health Posts based on the age of the buildings



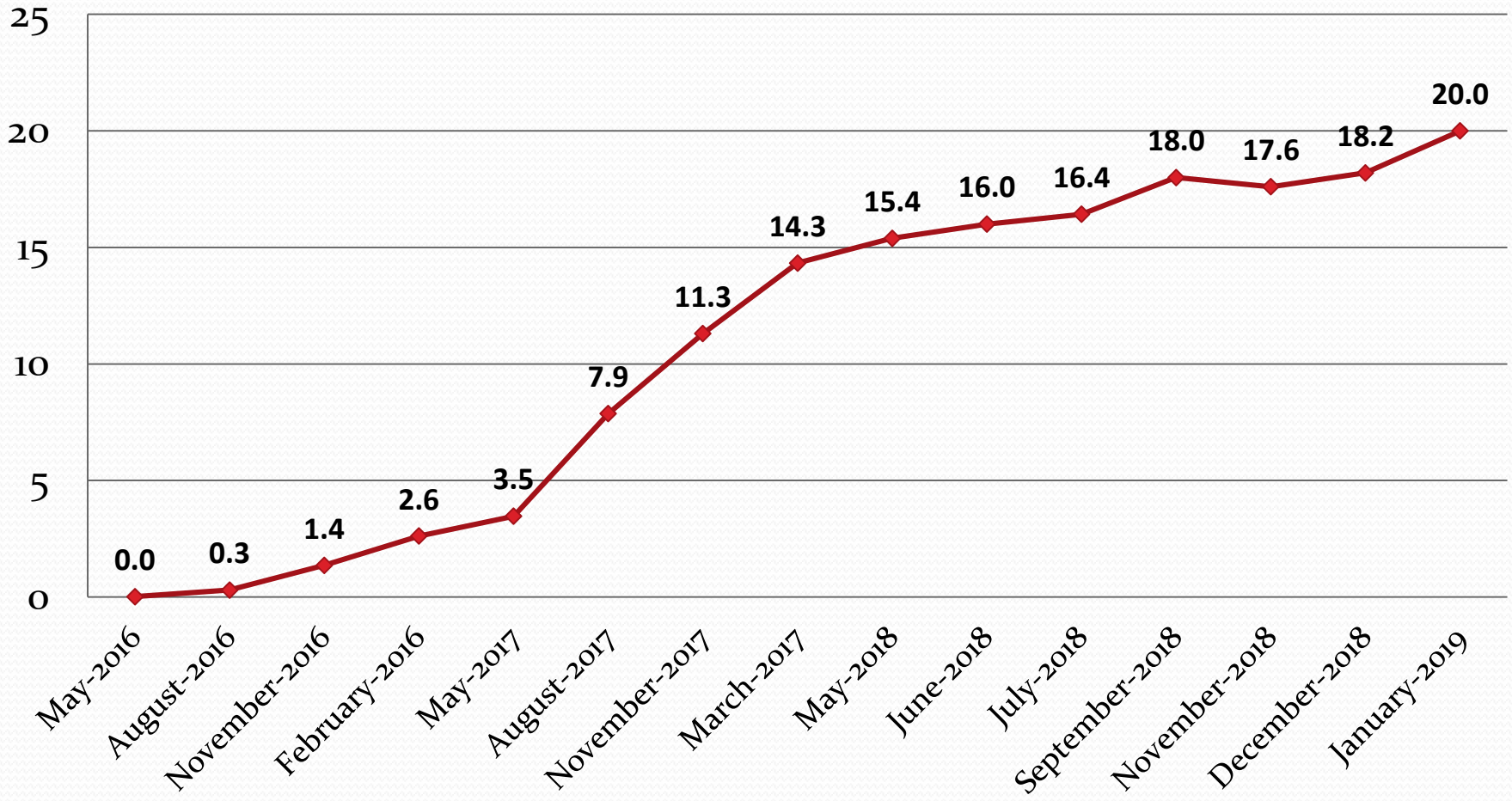
The percentage of Health Houses based on the age of the buildings



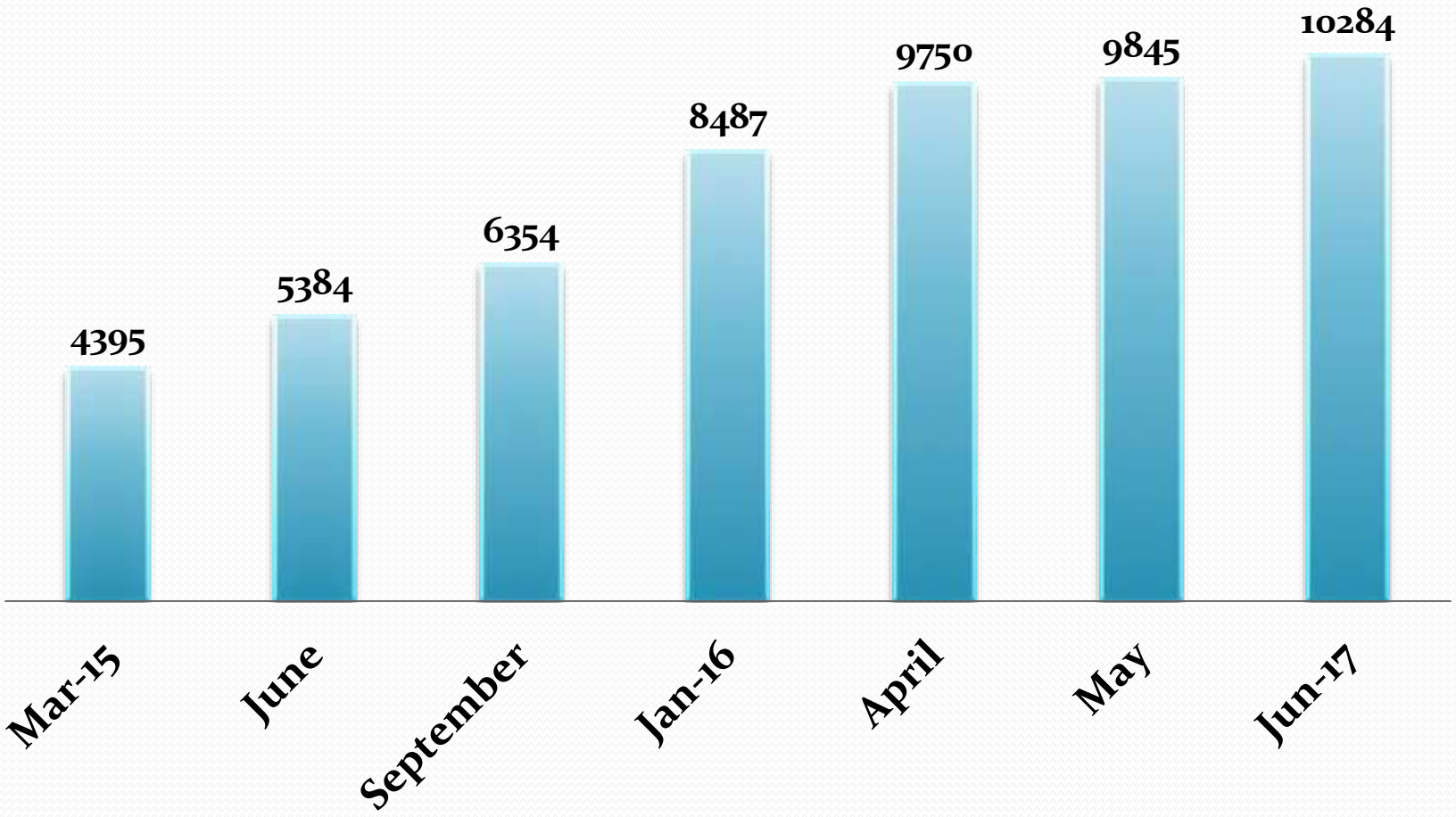
The percentage of health care facilities in Zahedan University of Medical Sciences with access to the Internet



The average number of primary health care services provided per person by ZAUMS based on the electronic health profile (Sib) database, 2016-2019



Recruitment of more than 10,000 Community Health Volunteers (CHVs), 2015-2017

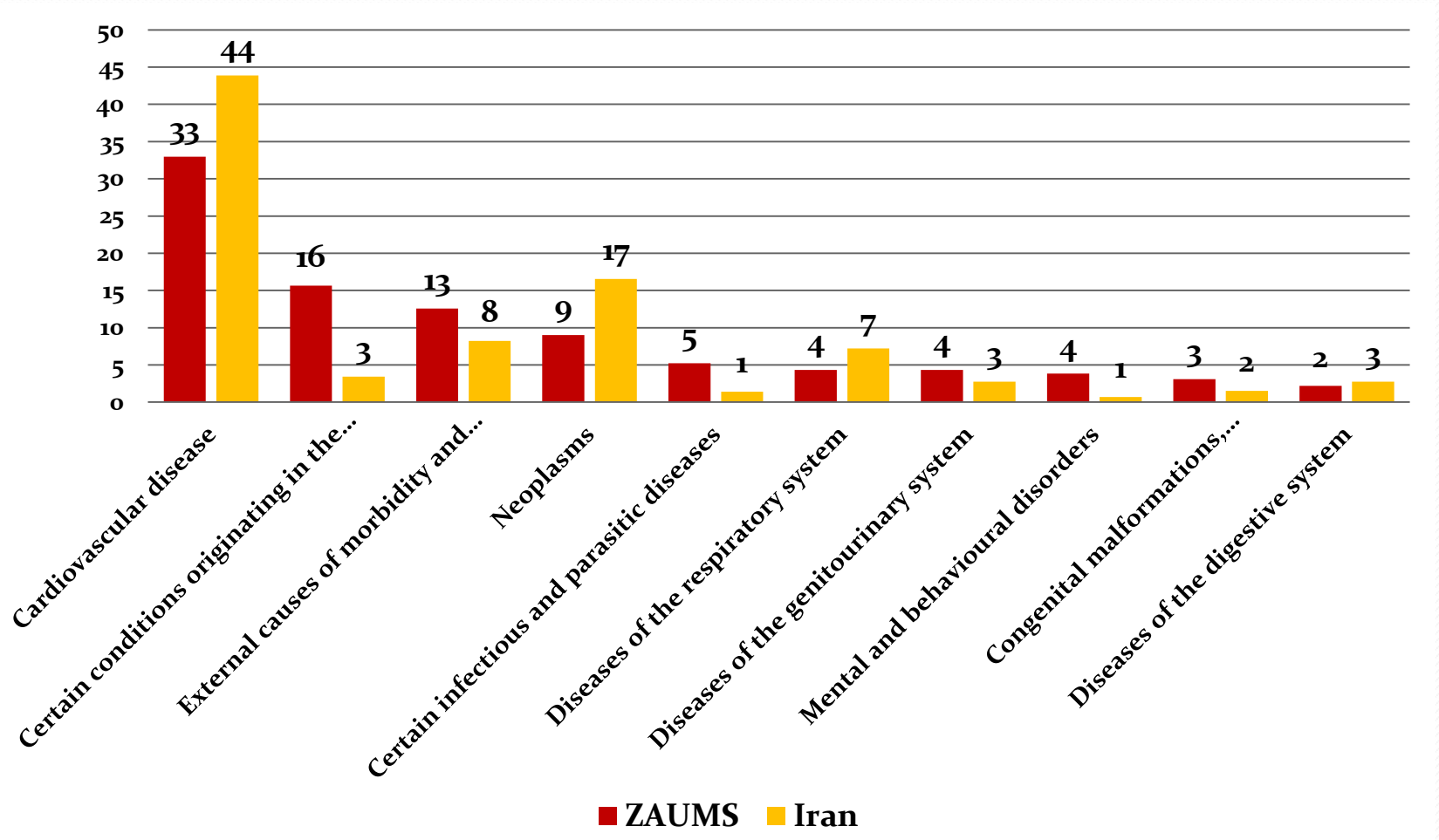


Tuberculosis Awareness Raising and Case Finding Campaign

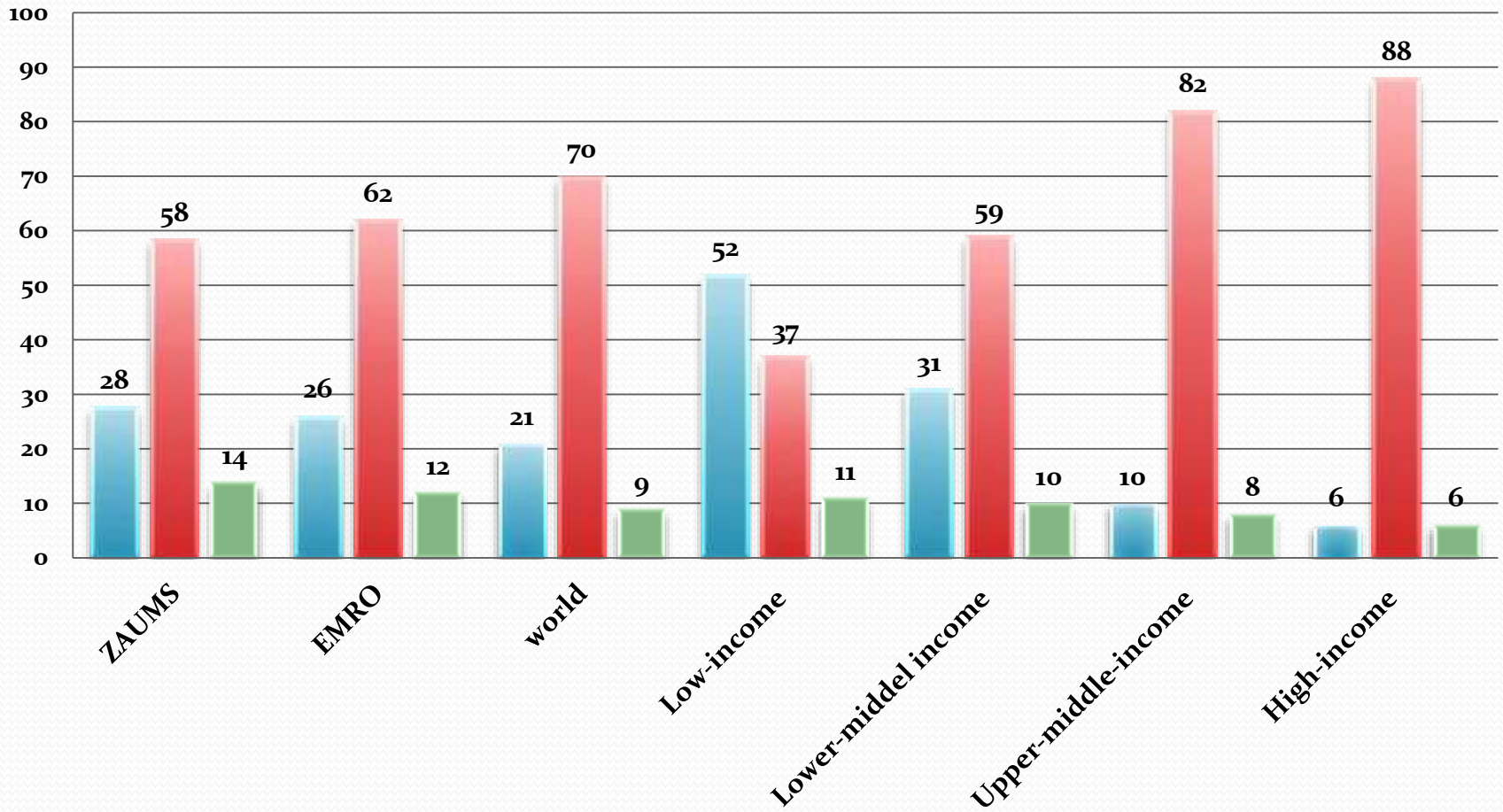
- Started in January 2017
- More than 130 CHVs involved.
- 26 smear positive TB cases detected so far !

Selected Health Indicators

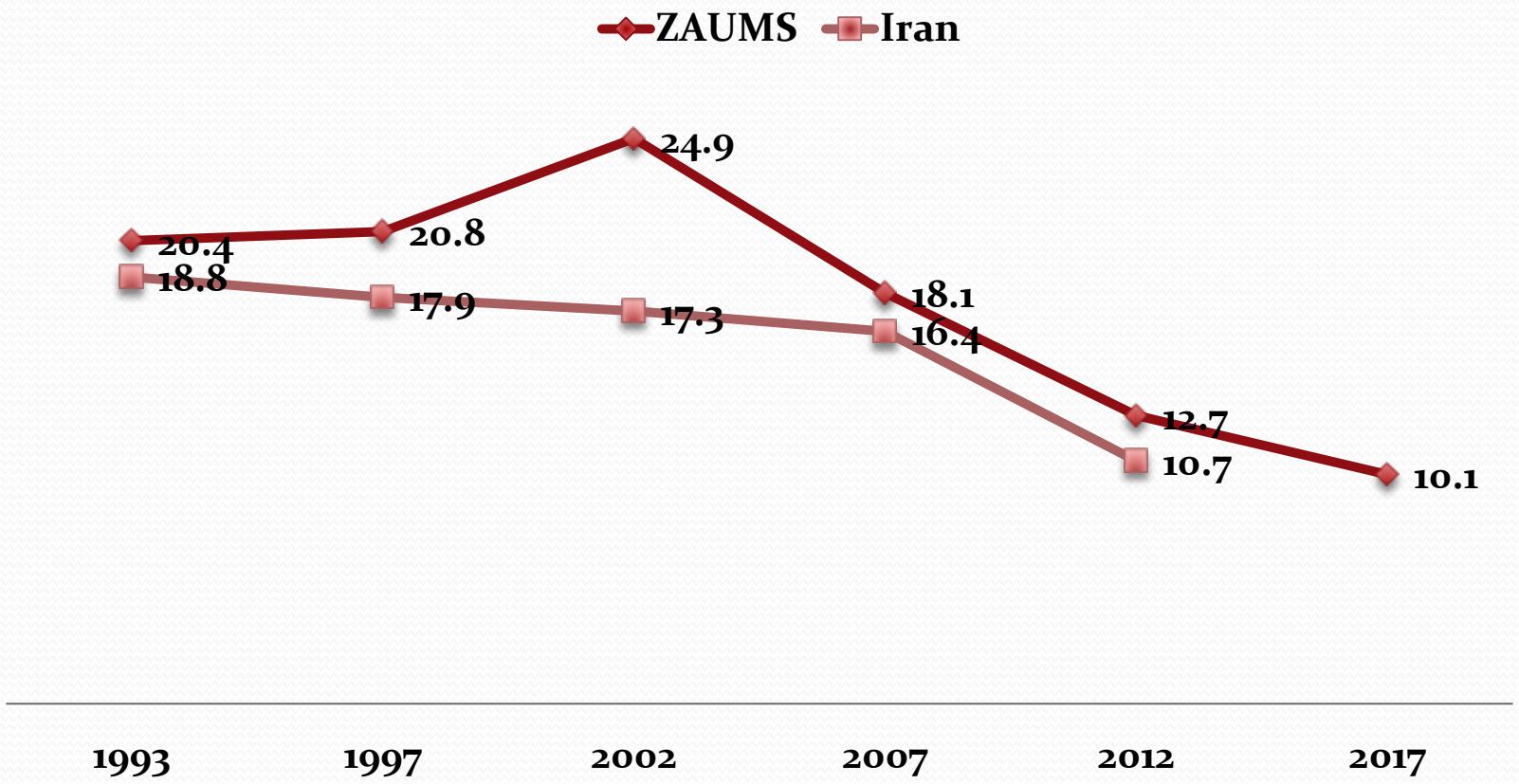
Comparison of the top 10 causes of death between ZAUMS and Iran, 2017



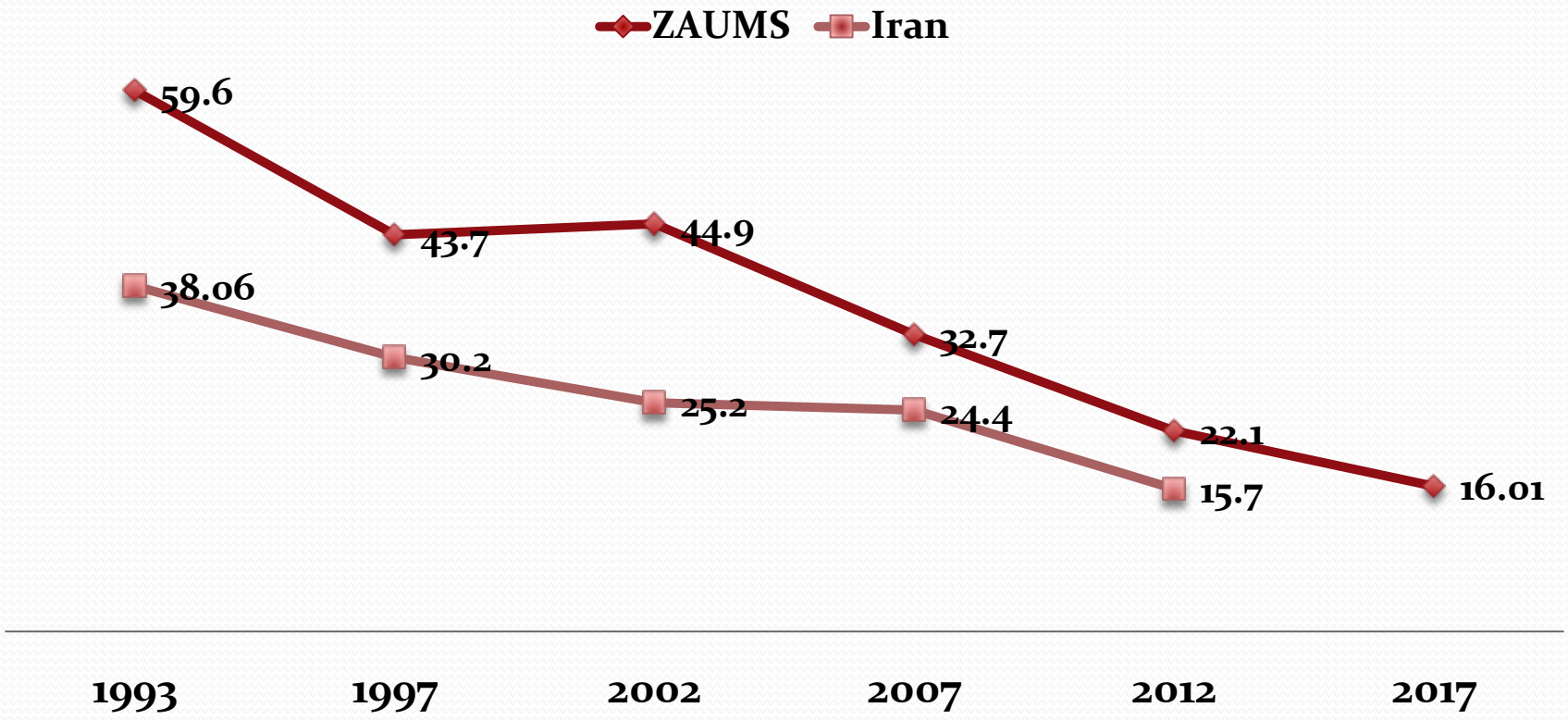
The main causes of death in ZAUMS as compared with EMRO and global patterns, 2017



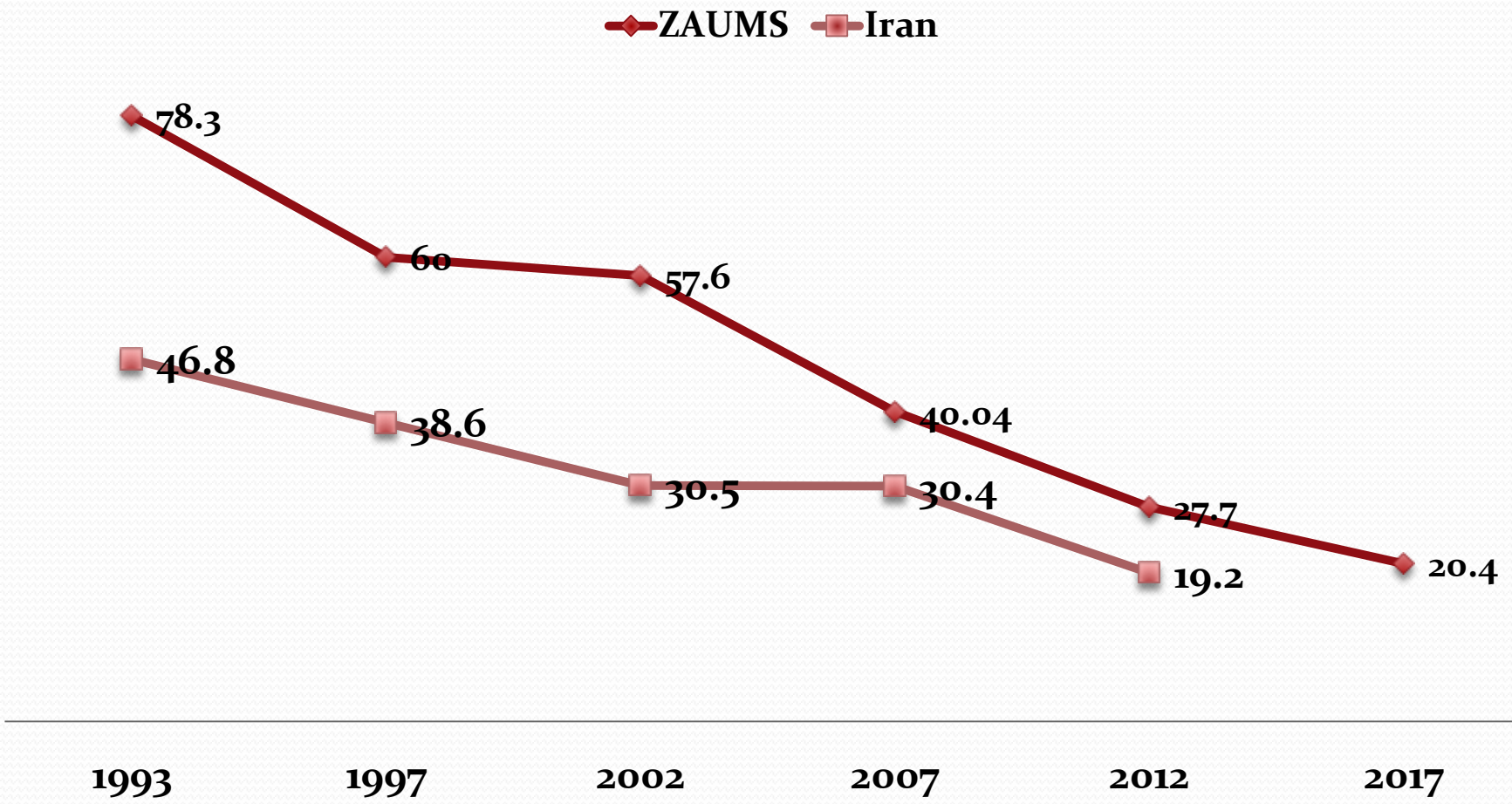
The trend of Neonatal Mortality Rate (NMR) in Sistan and Balouchestan Province as compared with national figures based on rural vital horoscope data - 1993-2017



The trend of Infant Mortality Rate (IMR) in Sistan and Balouchestan Province as compared with national figures based on rural vital horoscope data -1993-2017



The trend of Children Under 5 Years of age Mortality Rate (U5MR) in Sistan and Balouchestan Province as compared with national figures based on rural vital horoscope data -1993-2017



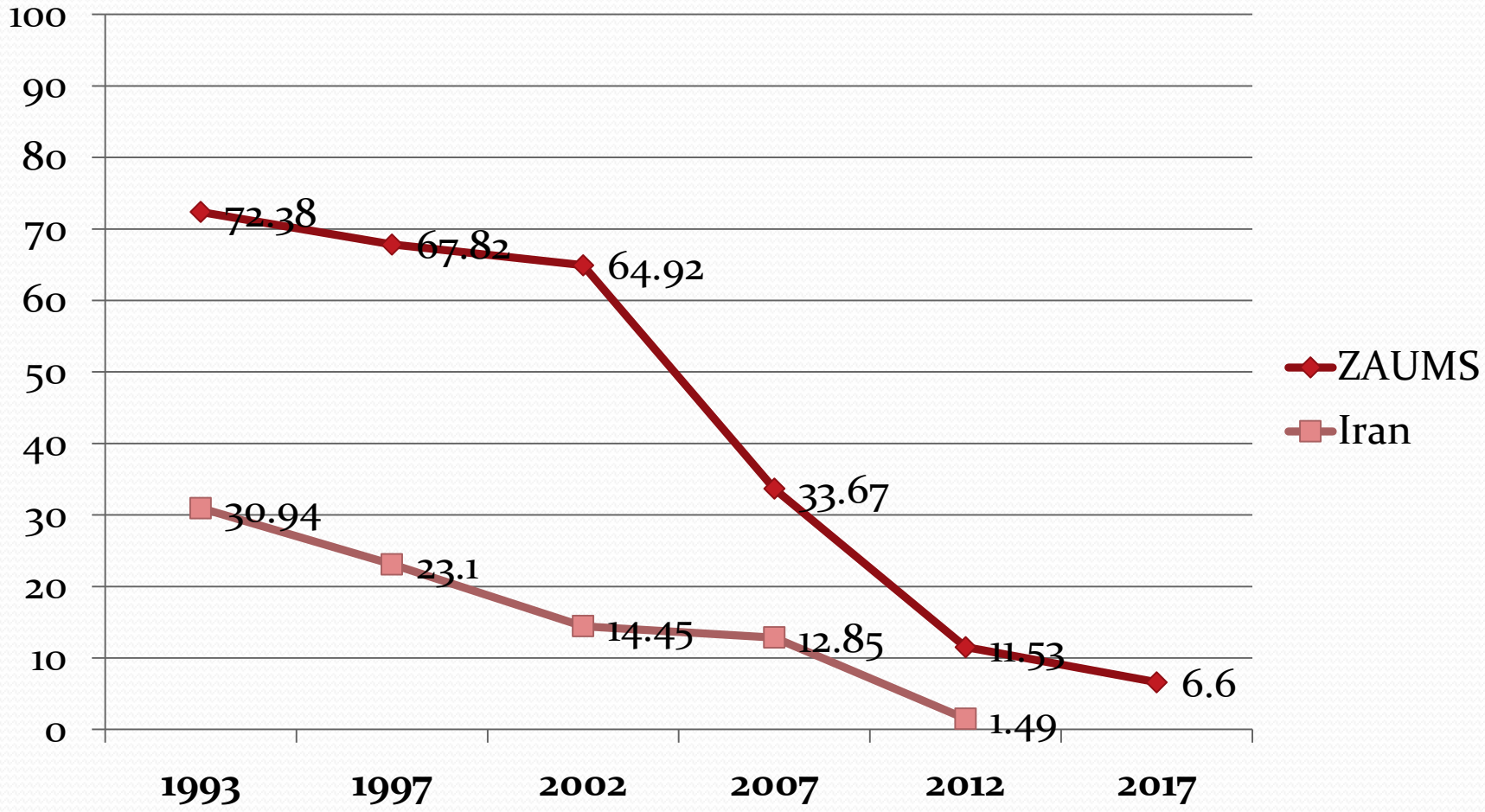
Comparing Maternal Mortality ratios between ZAUMS and Iran, 2009-2017

Year	Iran	ZAUMS	ZAUMS–Iran difference	ZAUMS/Iran ratio
2009	25.6	59.7	34	2.3
2010	22.07	43.4	21.3	2
2011	21.5	49.5	28	2.3
2012	19.5	52.8	33.3	2.7
2013	19.07	47.08	28	2.5
2014	18.09	53.18	35	3
2015	25.1	49.9	24.8	2
2016	18.1	30	12	1.7
2017	19.89	49.5	30	2.5

Comparing Maternal Mortality ratios in ZAUMS by Theil Index values, using place of residence-disaggregated data , 2012-2017

	MMR	MMR ratio	Ln (MMR Ratio)	Proportion of the population	Theil index multiplied by 1000
2012					
Urban	26.1	0.49	-0.71	0.49	2301.1
Rural	194.7	3.69	1.31	0.51	
Province	52.8				
2013					
Urban	15.2	0.33	-1.12	0.49	3642.6
Rural	221.9	4.78	1.56	0.51	
Province	46.4				
2014					
Urban	25.9	0.49	-0.72	0.58	457.8
Rural	112.4	2.11	0.75	0.42	
Province	53.2				
2015					
Urban	35.9	0.80	-0.23	0.58	99.1
Rural	63.4	1.41	0.34	0.42	
Province	44.9				
2016					
Urban	22.9	0.72	-0.33	0.58	148.3
Rural	49.8	1.56	0.44	0.42	
Province	32.1				
2017					
Urban	32.9	0.66	-0.41	0.63	126.9
Rural	80.6	1.63	0.49	0.37	
Province	49.5				

The trend of Births Not Attended by Skilled Health Staff in Sistan and Balouchestan Province as compared with national figures based on rural vital horoscope data -1993-2017



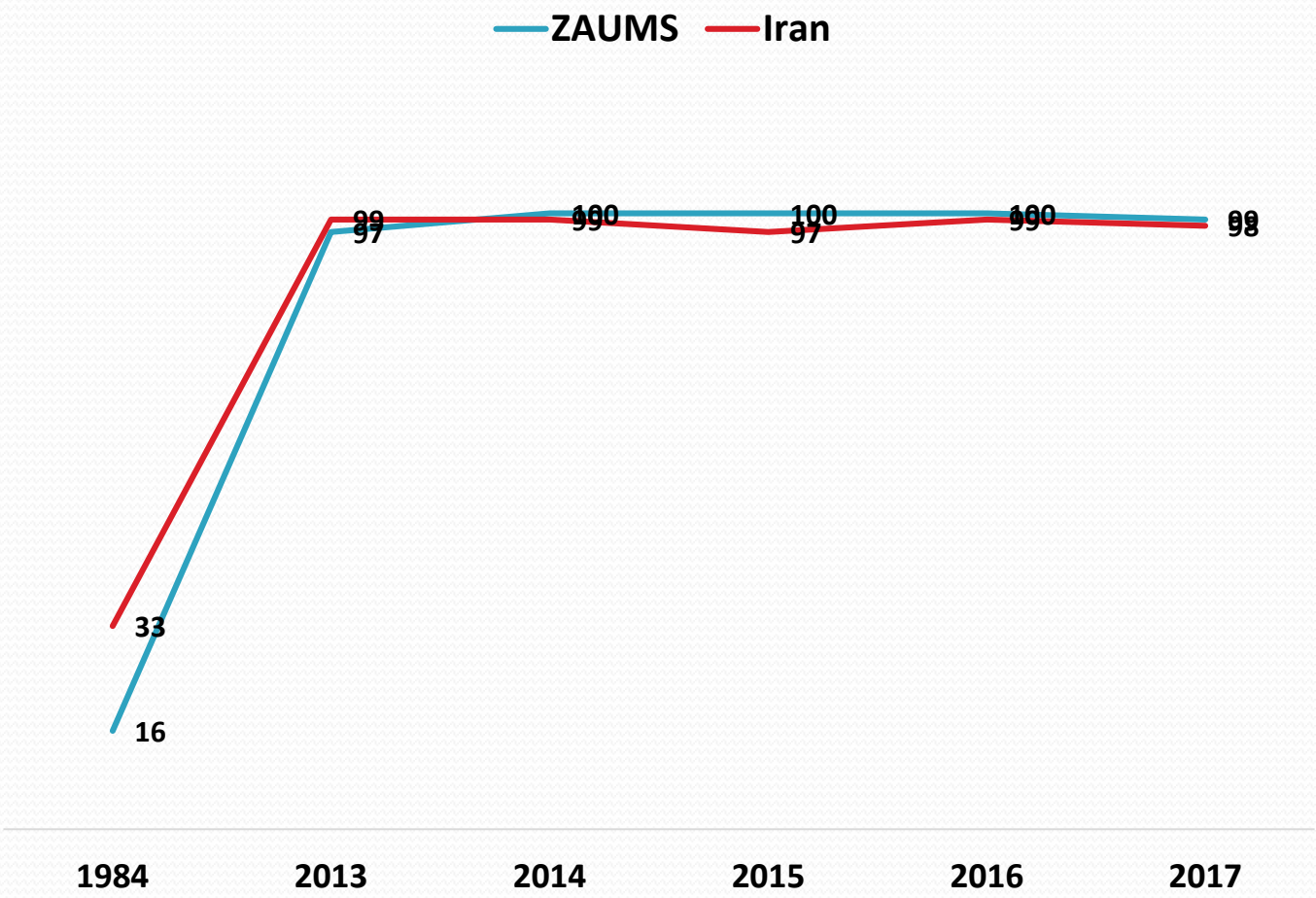
Prevalence of malnutrition in children under 5 years of age in Sistan and Baluchestan Province as compared with national figures, 2011-2017

Year	Indicators	Province	Country	Province-Country difference	Province /country ratio
2011	Underweight	12.88	4.08	8.80	3.1
	Stunting	20.7	6.83	13.87	3
	Wasting	8.9	4	4.9	2.2
2017	Underweight	11.6	4.3	7.30	2.6
	Stunting	16.2	4.8	11.4	3.3
	Wasting	6.5	4.3	2.20	1.5

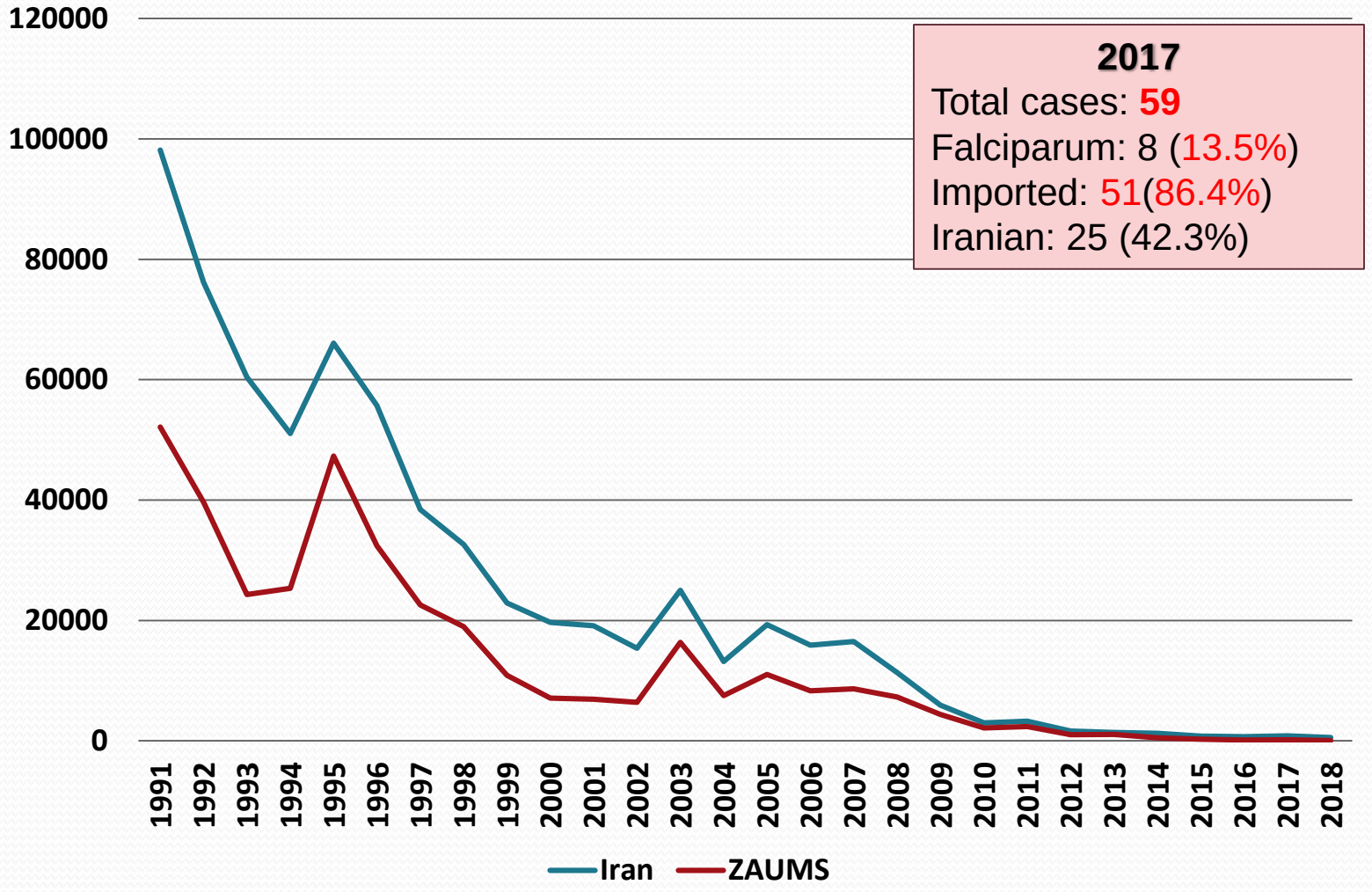
The prevalence of anemia in different age groups in Sistan & Balouchestan Province based on the National Integrated Micronutrient Surveys, 2002 & 2013

National Survey	Age group	Province	country	Province-country difference	Province-country ratio
NIMS1 2002	Children aged 15-23 months	54	38	16	1.4
	Children 6 years old	35	18	17	1.9
	Youth	36	17	19	2.1
	Middle aged	27	14.5	12.5	1.9
	Pregnant women	44	21	23	**2.1**
NIMS2 2013	Children aged 15-23 months	41.7	20.7	21	2
	Children 6 years old	22.8	11.3	11.5	2
	Youth	20.5	10.4	10.1	2
	Middle aged	18.8	11.3	7.5	1.7
	Pregnant women	26	16	10	**1.6**

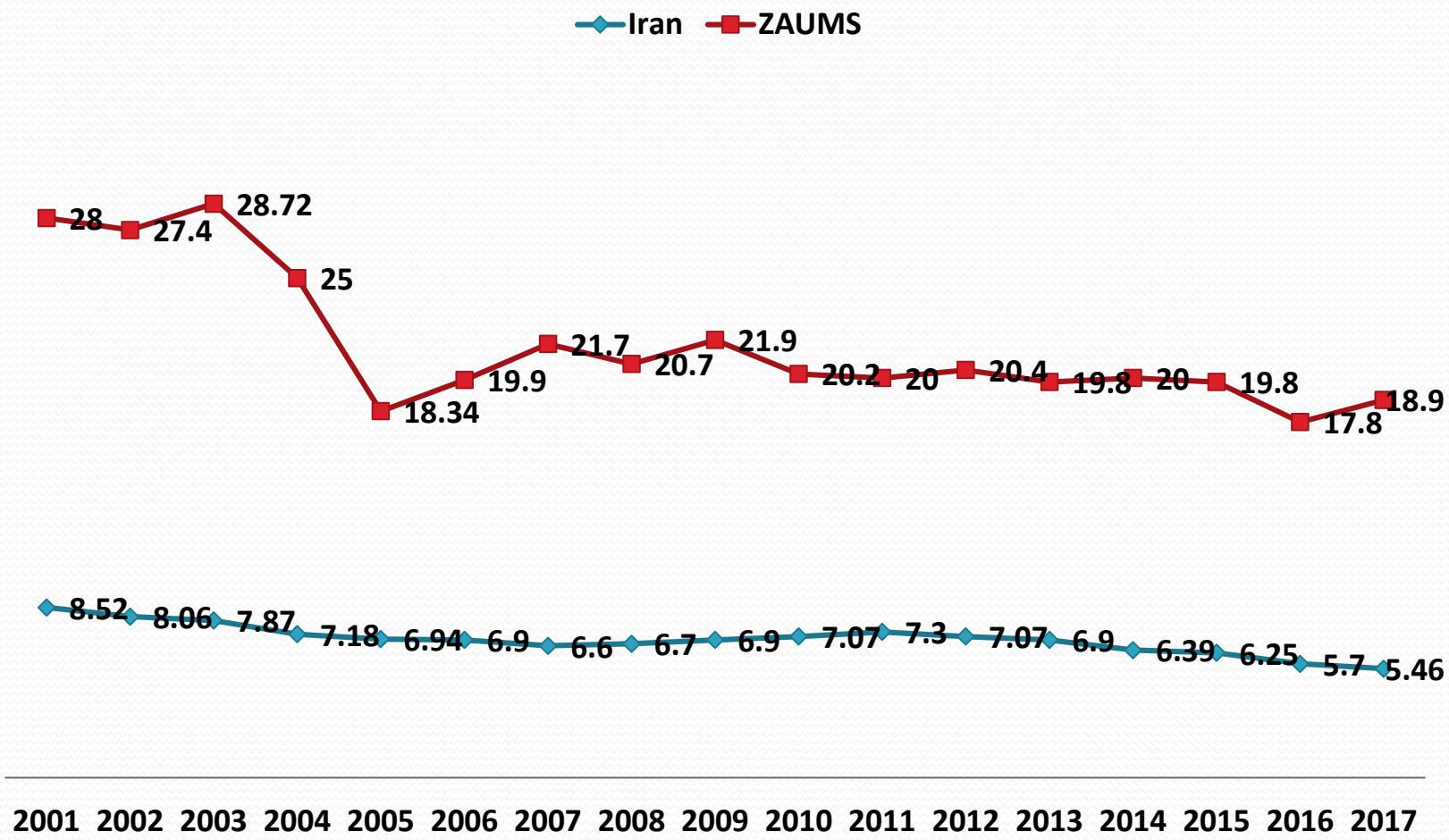
Comparing DTP3 vaccine coverage between ZAUMS and country , 1984-2017



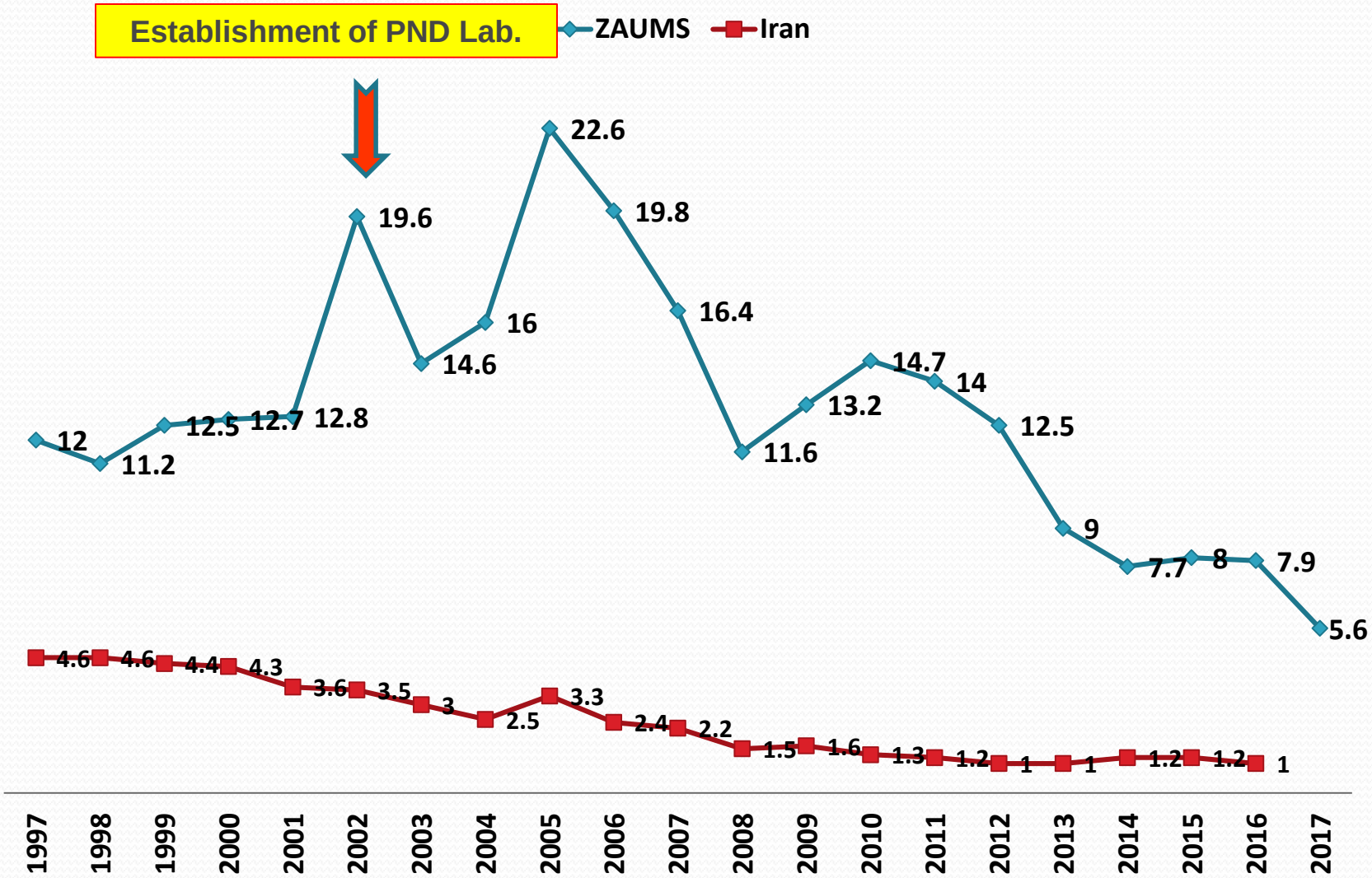
Comparing the frequency of malaria cases between ZAUMS and Iran, 1991-2018



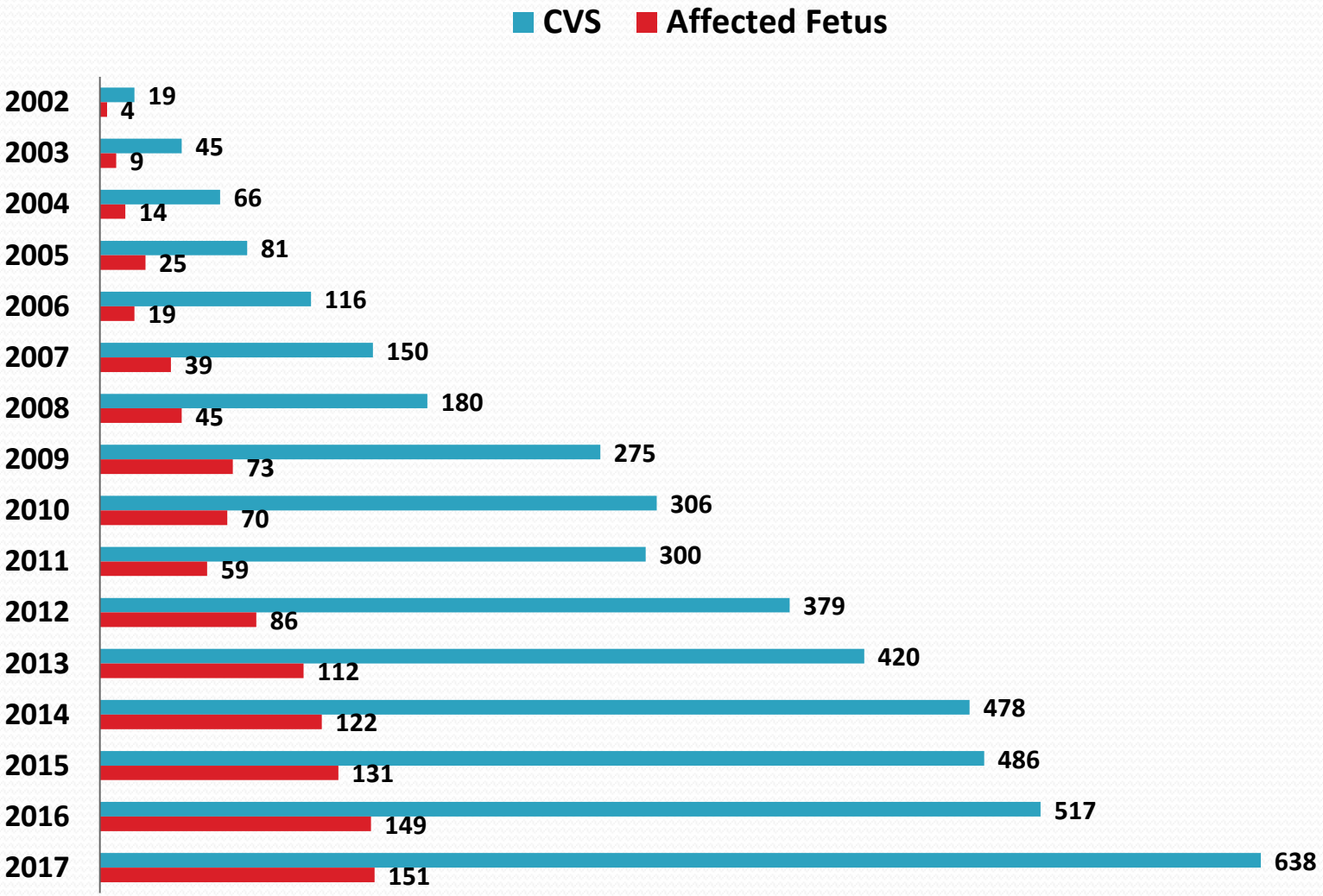
Comparing the incidence of smear positive TB (per 100,000 people) between ZAUMS and Iran, 2001-2017



Comparing the incidence of β-Thalassemia major (per 10000 live births) between ZAUMS and country, 1997-2017



The Zahedan University of Medical Sciences PND lab performance for diagnosis of pregnancies affected with β-Thalassemia major, 2002-2017



Conclusions & Approaches to Reduce Health Inequality

Conclusion

- The province has witnessed great **achievements** in public health during the past 4 decades.
- But there are some degrees of **health inequality**, especially in maternal health, malnutrition and the burden of the communicable disease that needs to be properly addressed.
- It is prudent to closely **monitor health inequality** status in the province via standardized data collection to better identify and address disparities.
- Increasing the **capacity of the healthcare workforce** to identify and address disparities is another priority area.

Conclusion

- Recognition that health is influenced by many factors outside the health care system can strengthened public health's commitment and leadership in activities that address the **Social Determinants of Health**, such as income, education, early childhood development and social connections.

- A **multi-sectoral and multidisciplinary approach** is needed to stimulate intersectorial arrangements and programs in primary health care system to address the needs of each of the disadvantaged groups, according to local context and priorities.

Thanks for your attention
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