

MEDICAL AND DENTAL TRENDS FOR HYGIENISTS

(and Dentists, too)

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November 8, 2020

NEWS FROM THE CANADIAN BROADCASTING CORPORATION

KITCHENER — Dental hygienists are now legally able to treat their spouses in Ontario.

The province passed the new regulation last week. Prior to that change, treating a spouse could be considered sexual abuse of a patient.

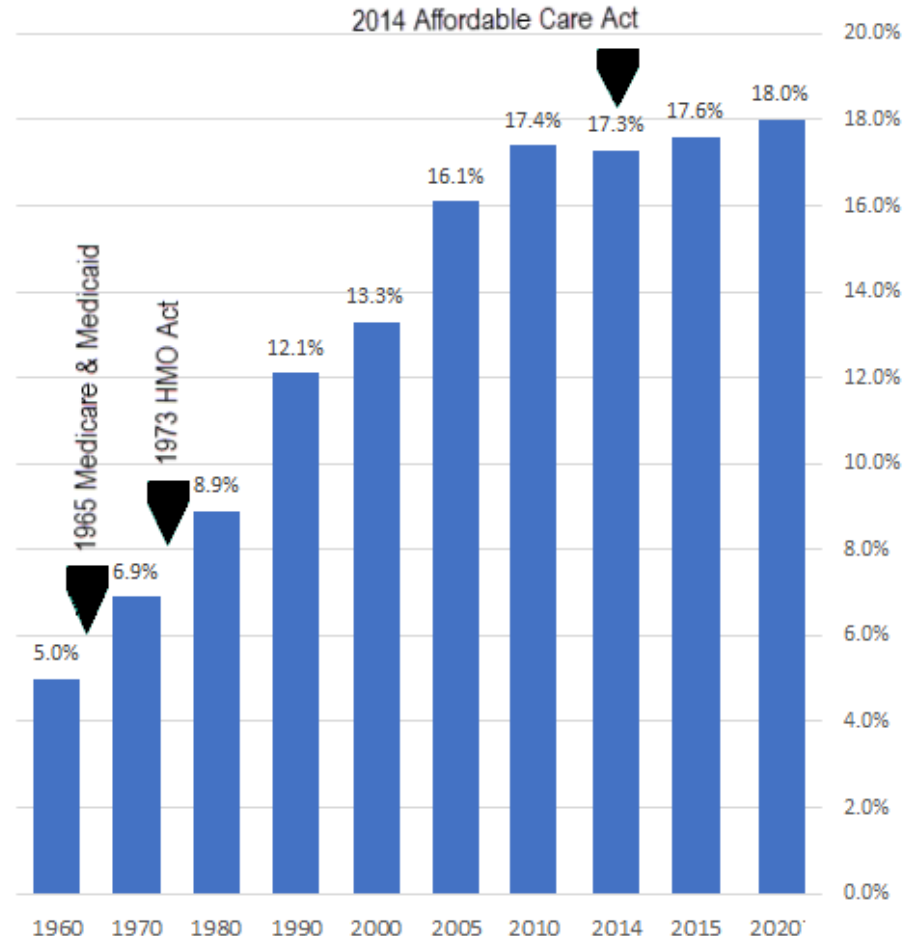
Alex Tenase said he lost his dental hygienist license for treating his wife and was labelled a sexual abuser because of it.

HEALTH CARE TRENDS

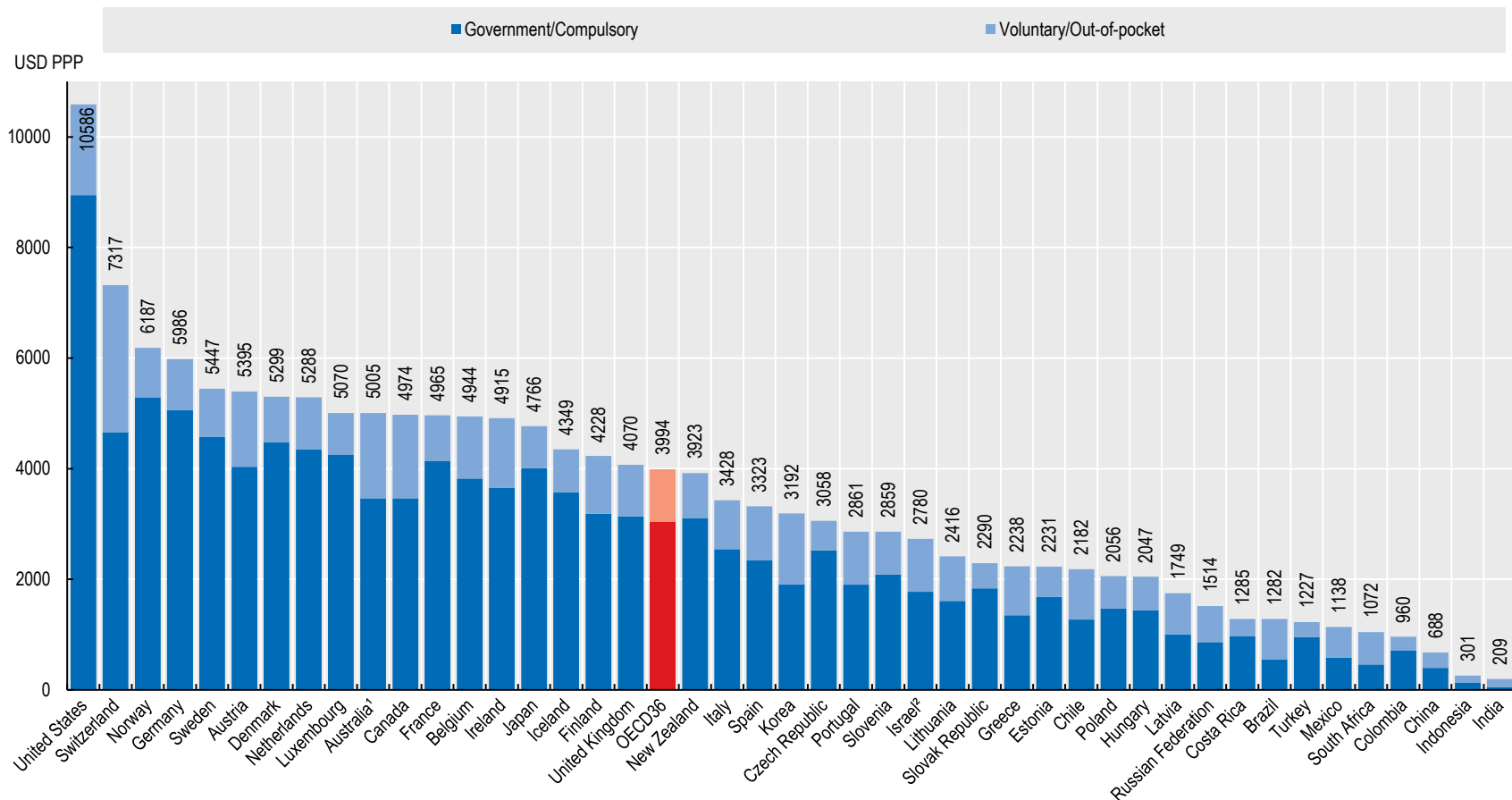
U.S. NATIONAL HEALTH EXPENDITURE AS PERCENT OF GDP FROM 1960 TO 2020

Noteworthy Events

- 1965: The U.S. launches Medicare (health coverage for seniors) and Medicaid (health coverage for the economically challenged).
- 1973: The HMO Act is written into law in an attempt to enable the creation of entities that would combine health insurance with health care delivery and to begin to curtail the cost push of health care services.
- As access to care and financing of care grows and HMO-type network plans spawn indemnity-PPO plans with broad access, the cost of health care as a % of GDP continues to grow until we began to see a flattening of that growth only 10 years ago.
- The ACA brings in another 25 million+ Americans to help finance health care expenses and enable more of the U.S. population to seek more affordable care.

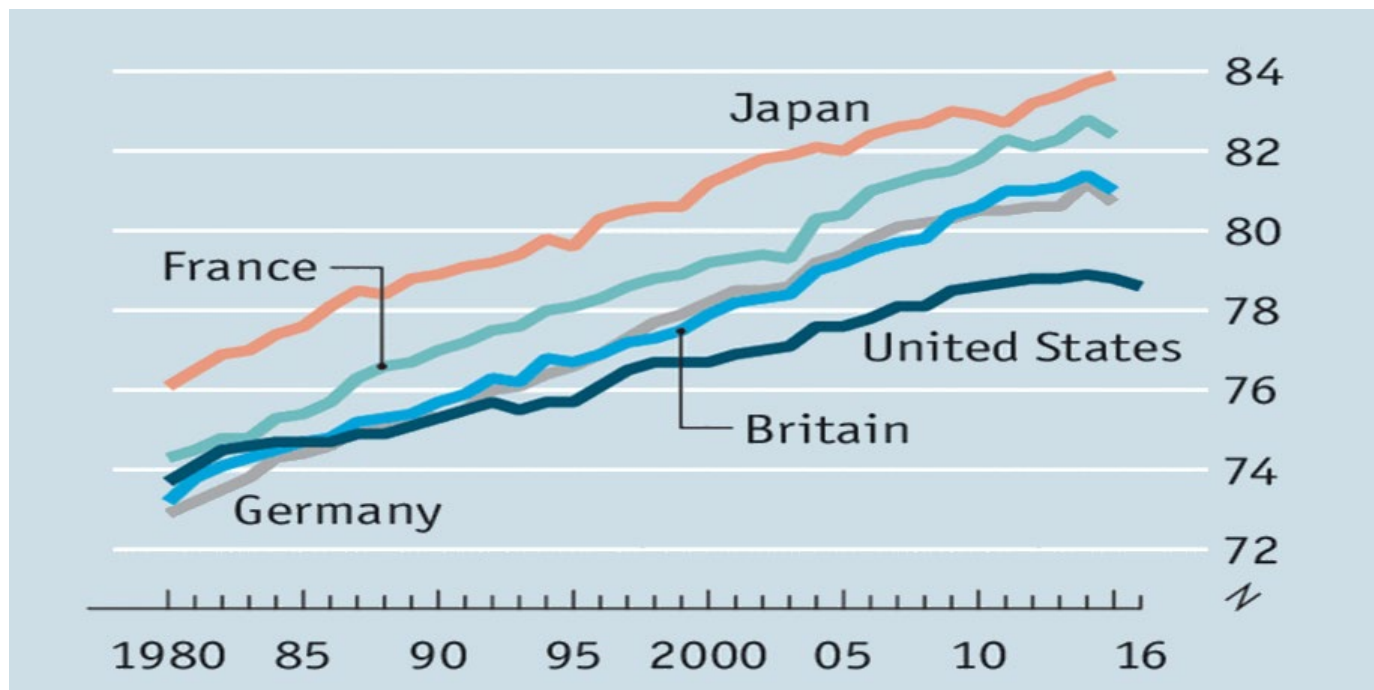


HEALTH EXPENDITURE PER CAPITA, 2018 (OR NEAREST YEAR)



Source: OECD Health Statistics 2019; WHO Global Health Expenditures Database

WRONG TURN – AVERAGE LIFE EXPECTANCY AT BIRTH (IN YEARS)



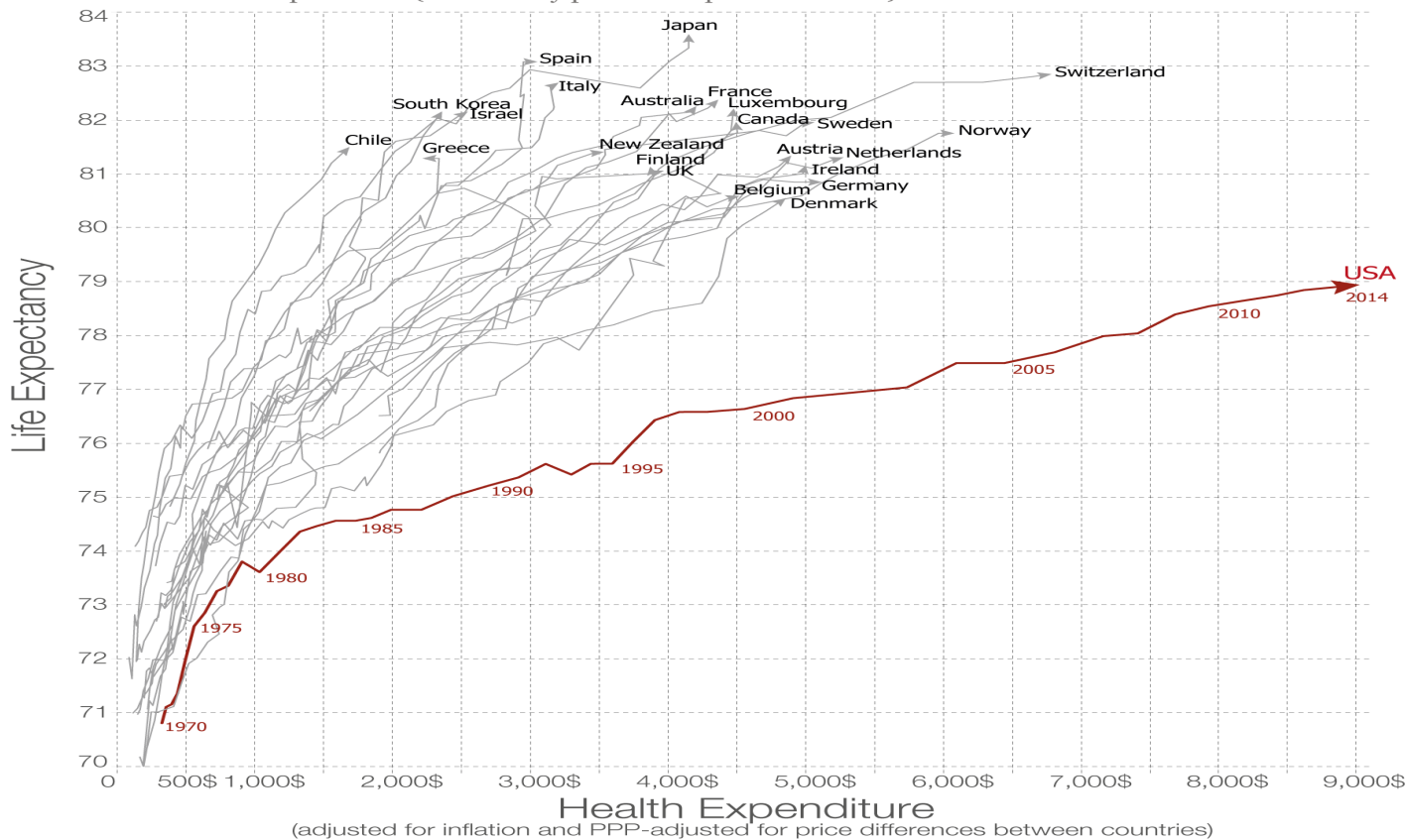
Sources: OECD; CDC; Economist.com

LIFE EXPECTANCY VS. HEALTH EXPENDITURE OVER TIME 1970-2014

Life expectancy vs. health expenditure over time (1970-2014)

Our World
in Data

Health spending measures the consumption of health care goods and services, including personal health care (curative care, rehabilitative care, long-term care, ancillary services and medical goods) and collective services (prevention and public health services as well as health administration), but excluding spending on investments. Shown is total health expenditure (financed by public and private sources).



Sources: Health expenditure from the OECD; Life expectancy from the World Bank. Licensed under CC-BY-SA by the author Max Roser. The interactive data visualization is available at OurWorldinData.org

Figure 1 – Total U.S. Dental Expenditures (\$ millions)

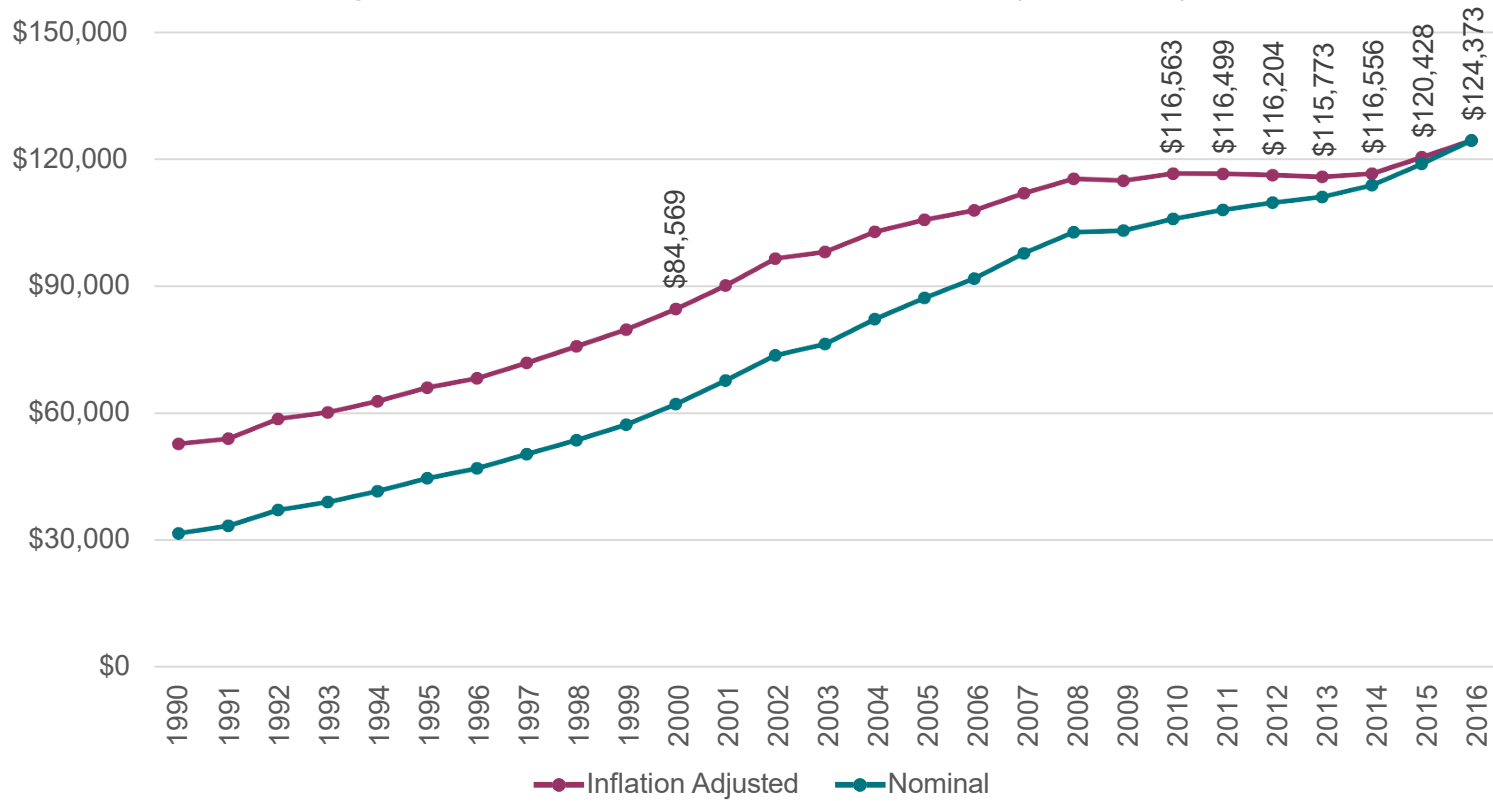


Figure 2 – National Dental Expenditures per Capita (in constant 2016 dollars)

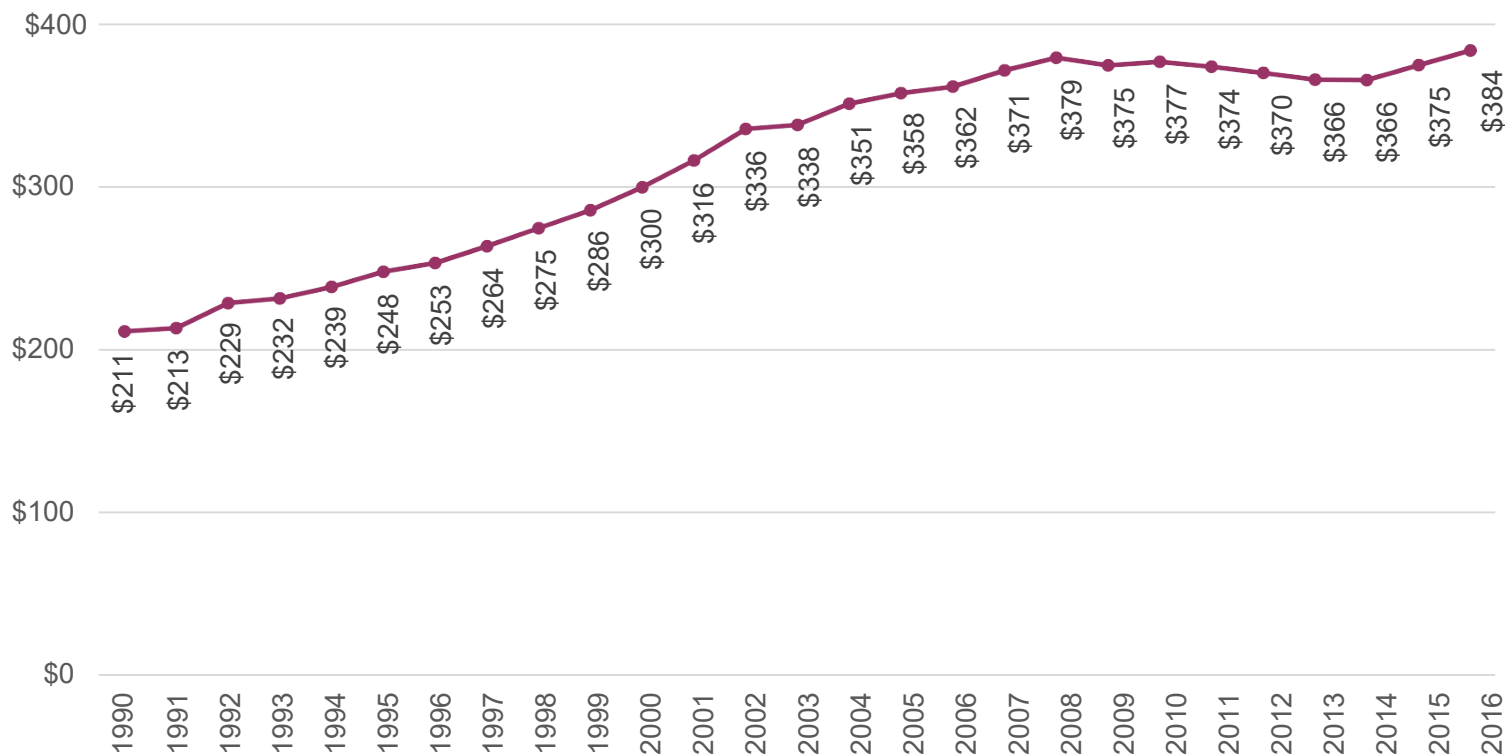


Figure 3: Average Annual Growth Rate of Overall Health and Dental Expenditures

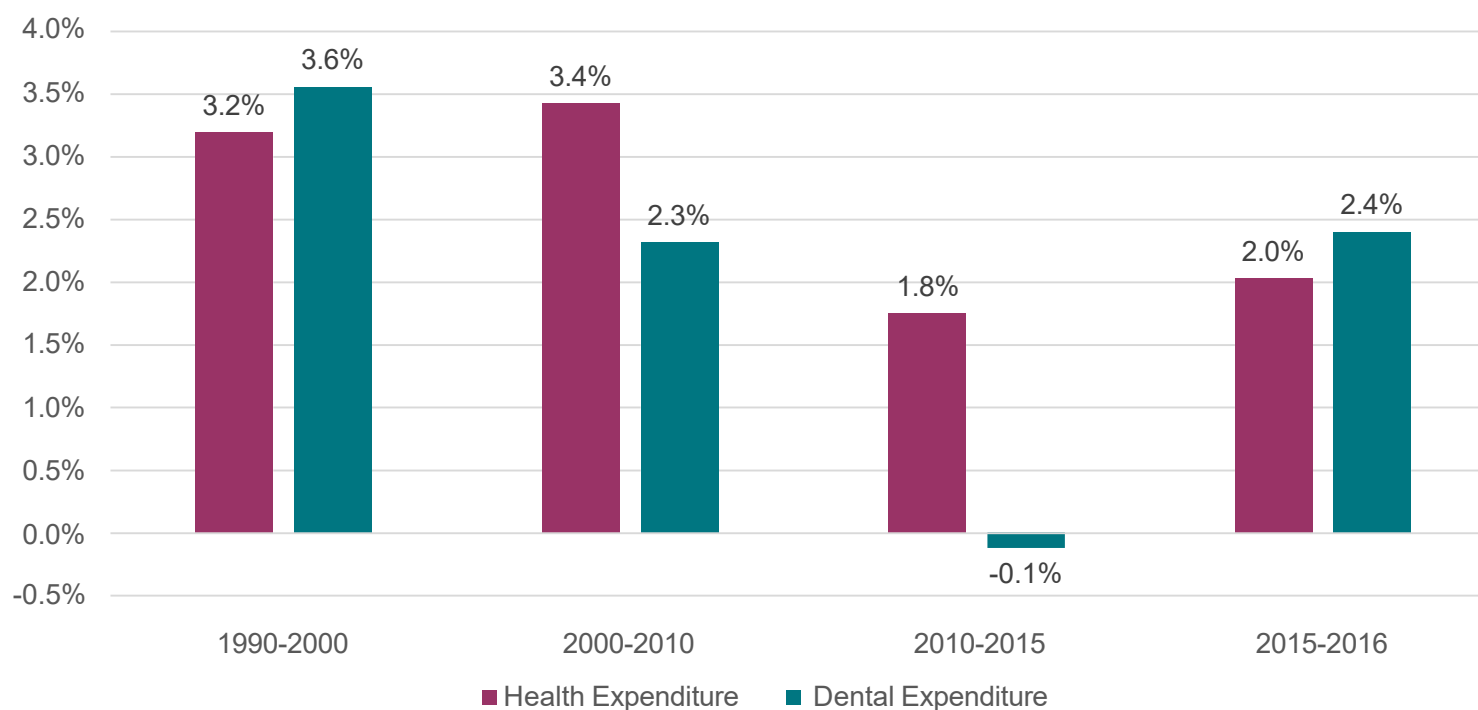
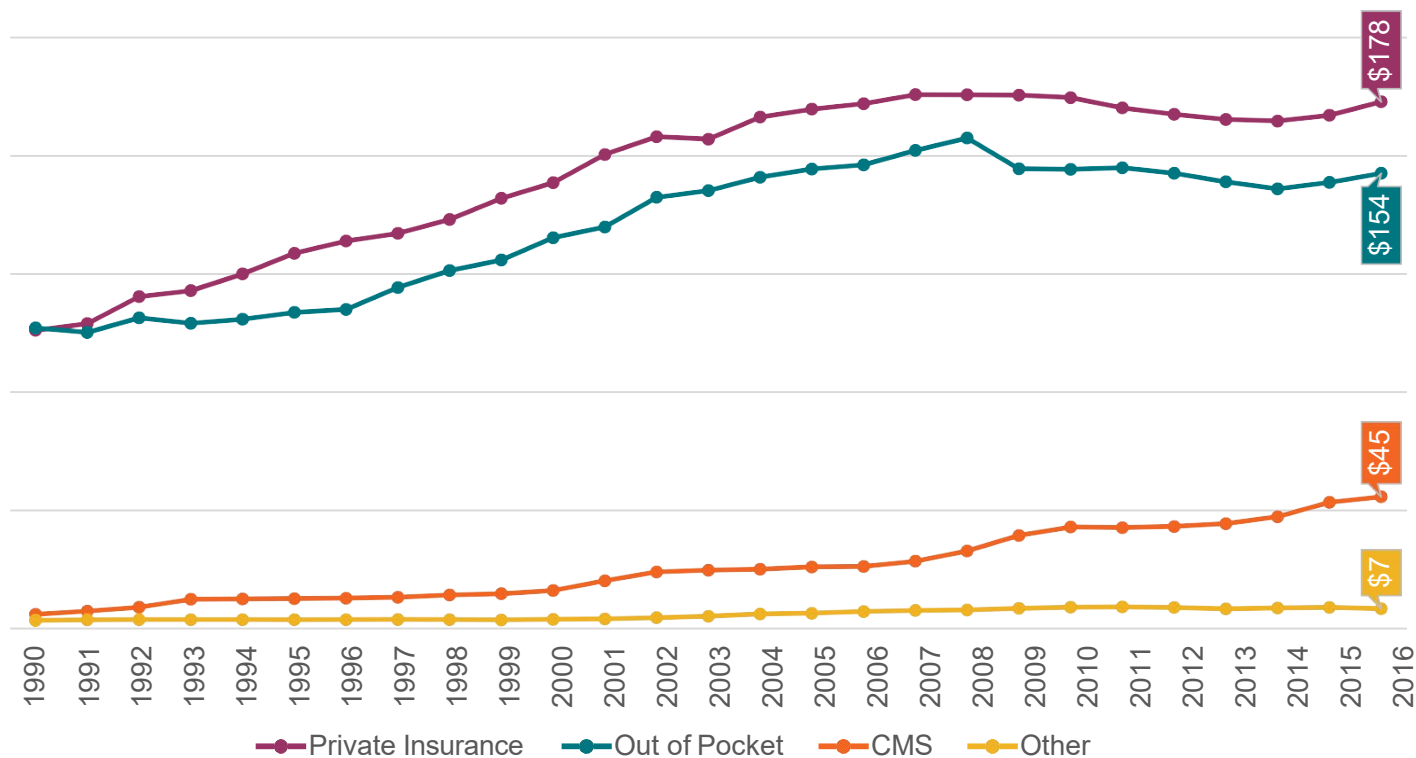


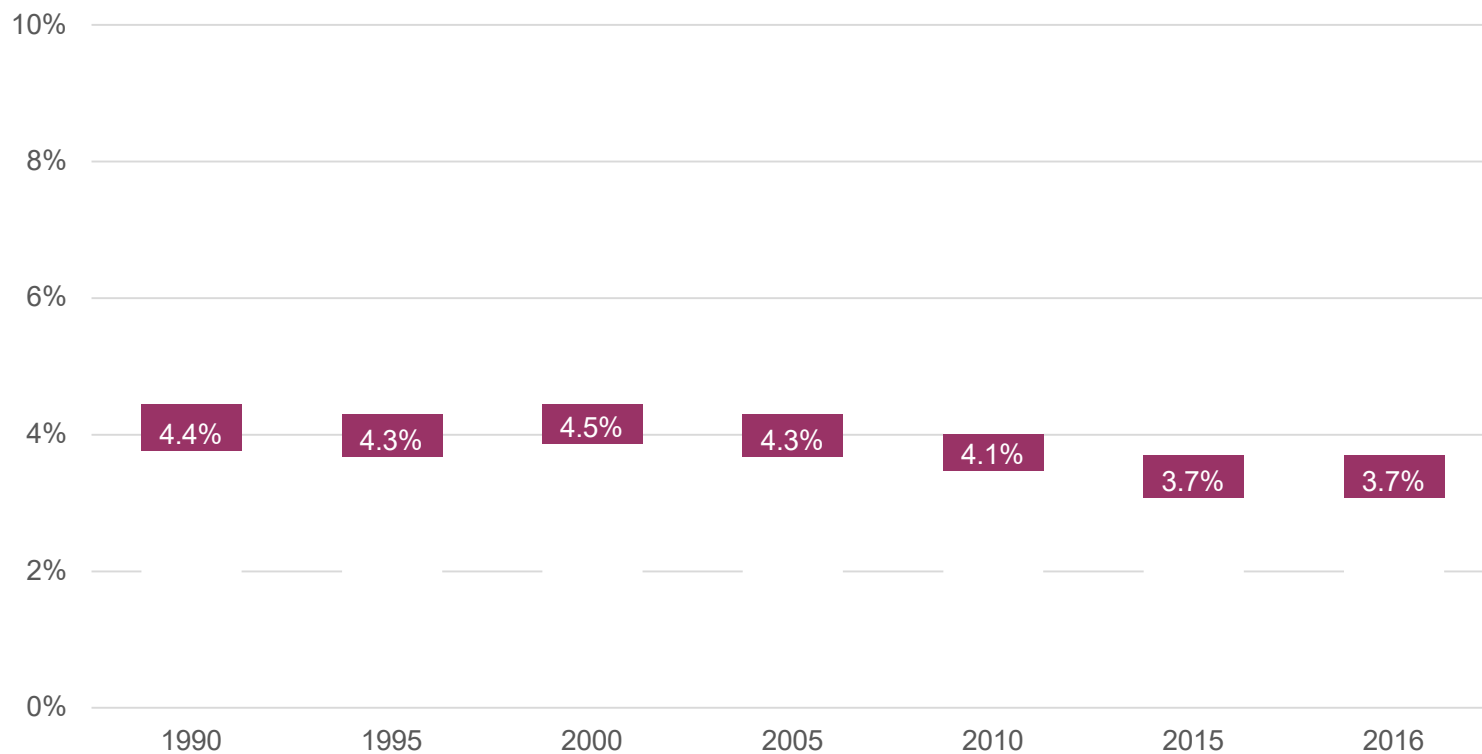
Figure 6: National Dental Expenditures per Capita by Source of Financing
(in constant 2016 dollars)



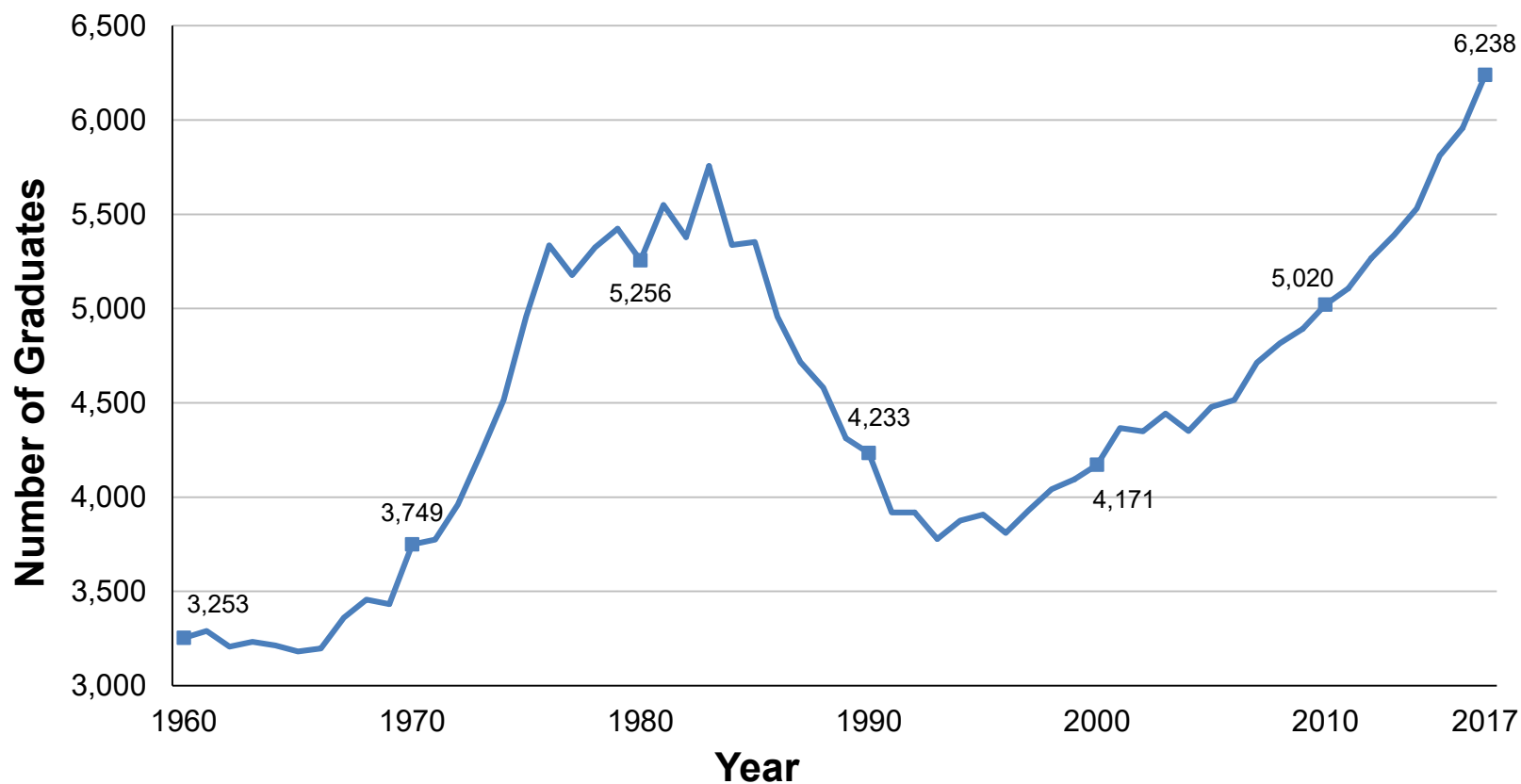
THE GREAT RECESSION OF 2009

- First decrease in consumer spending on dental care in more than a generation
- Fees were depressed for six years
- Owner dentists failed to hire associates
- Gross production decreases of up to 70%
- Decreased hours and increased RIF for staff
- Retired dentists returned to workforce due to investment losses
- Dentists declaring bankruptcy for reasons related and unrelated to their practices
- DSOs looking to expand identified large numbers of graduates without traditional job offers

Figure 7: Dental Expenditure as a Share of Total Health Expenditures

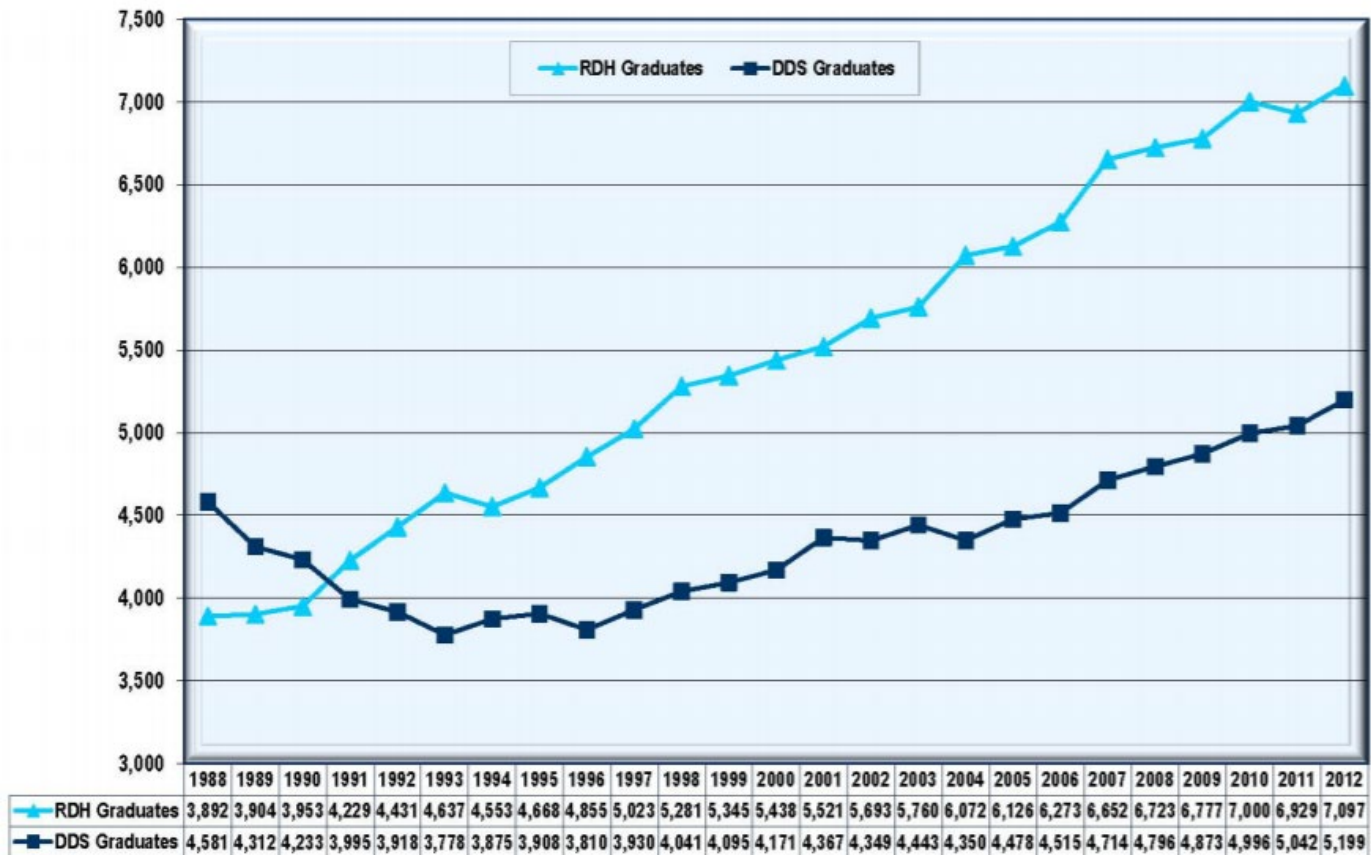


TOTAL U.S. DENTAL SCHOOL GRADUATES



DENTAL HYGIENE EDUCATION FACTS

Number of Graduates 1988-2012



Statistics are based on data obtained from the 1988-2012 American Dental Association (ADA) Survey of Allied Dental Education and the Survey of Dental Education: Volume 1 – Academic Programs, Enrollment and Graduates, 1988-2012.

DRIVERS OF HEALTH CARE COSTS

KEY DRIVERS OF HEALTH

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment Income Expenses Debt Medical bills Support	Housing Transportation Safety Parks Playgrounds Walkability Zip code / geography	Literacy Language Early childhood education Vocational training Higher education	Hunger Access to healthy options	Social integration Support systems Community engagement Discrimination Stress	Health coverage Provider availability Provider linguistic and cultural competency Quality of care
Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations					

Sources: Henry J. Kaiser Family Foundation. All rights reserved.

KEY DRIVERS OF HEALTH

Top causes of death are related to unhealthy behaviors.

The leading causes of heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, and diabetes include one or more of the following lifestyle-related factors:



Smoking



Poor diet



Overweight



Obesity



Physical
inactivity

SOME FACTS TO THINK ABOUT

- Increase in health care costs is double the rate of inflation
- U.S. obesity rate is 40% (BMI >30)
- Rise in diabetes rates will result in shortages of medication by 2030
- Drug ODs in 2019 – 71k. Half due to synthetic narcotics
- Suicides in 2018 – 48k. Veterans – 6k. Attempts 1.4M
- Viral pandemics will occur more frequently as developing countries impinge on habitats of specific species
- COVID-19 is the first known coronavirus to cause hypercoagulation (blood clots) in humans

HEALTHCARE DELIVERY “SYSTEM” PRINCIPAL CHALLENGES

- What’s not in question is the quality of health care delivery in the U.S.
 - Advances in diagnostic and treatment technologies, tools, and training are the finest in the world
- The principal challenges are:
 - Health care is rendered in “silos” (a lack of integration as many physicians practice in narrow specialties with no gatekeeper or coordinator of care)
 - Paying based on “singular” services rendered (and not outcomes)
drives up cost
 - Access to care in impoverished areas and rural communities

**HOW HEALTH CARE
TEAMS AND THIRD-
PARTY PAYERS
WORK TOGETHER**

HEALTH CARE DELIVERY “SYSTEM” MEETING THE CHALLENGES

- How do we meet these challenges head on?
 - Integrated care models (all physicians and nurse practitioners “under one roof”)
 - Information technology innovation enables integration that links individuals and their health with their health care provider “teams” and allows for coordination of their care
 - Paying providers based on outcomes/improved health
 - “Virtual access models” through telemedicine, teledentistry, and AI
 - Evolution of Population Health Management models (adapting care to meet the changing needs of the community)

TRENDS IN HEALTH SERVICES

Population Health Management (PHM):

Gathers data about health and well-being across multiple settings to identify the main health care needs of the community and adapt services accordingly.

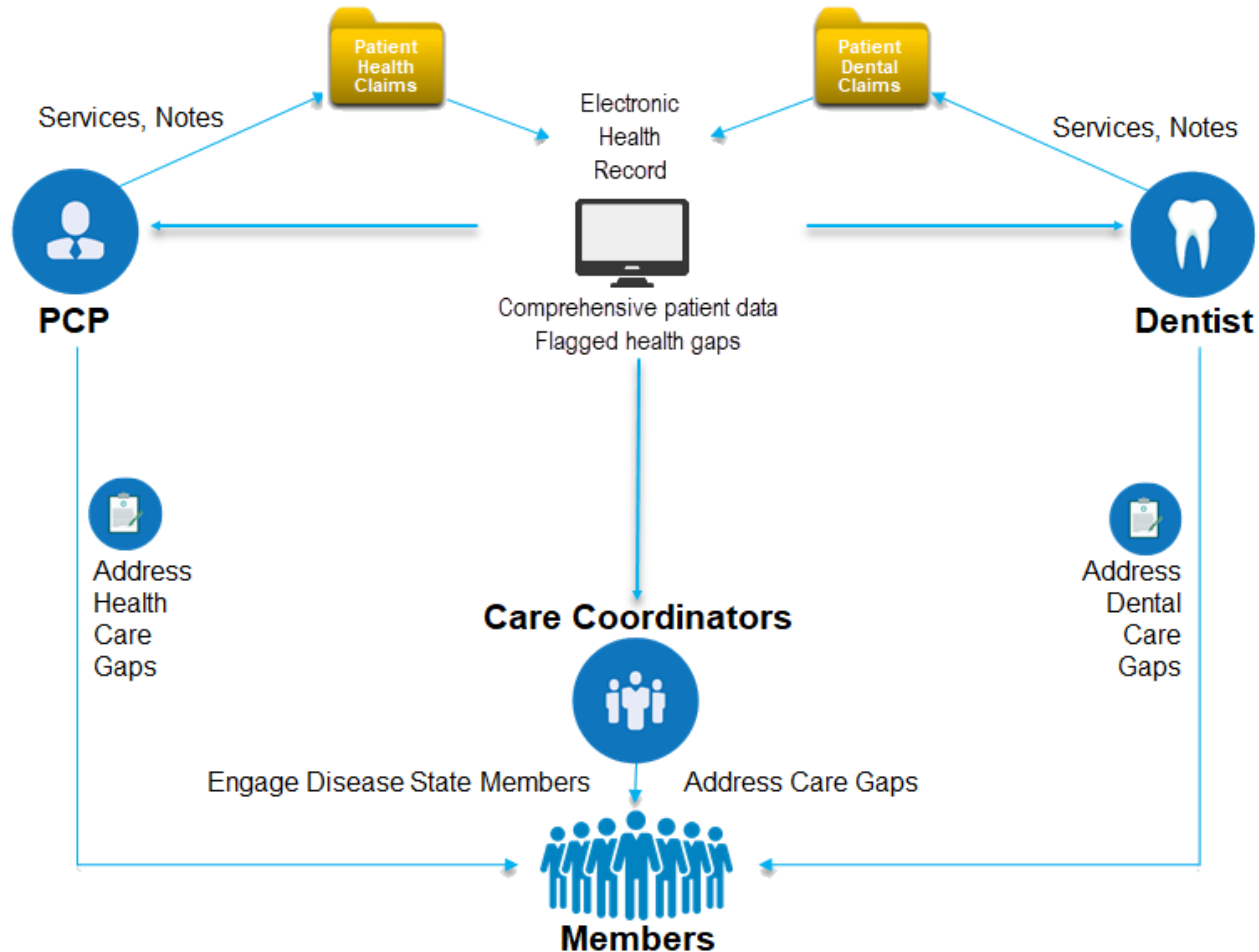


MEMBER/PATIENT-CENTRIC CARE MODEL



HMSA CONNECTED CARESM

HMSA Connected Care is a community of care in which physicians, dentists and care coordinators work to close patient care gaps.



DENTAL INSURANCE CONTRIBUTION TO THE SOLUTION: ORAL HEALTH FOR TOTAL HEALTHSM

- Decreases morbidity, mortality, dental, and medical health care costs
- Makes up for the effects of poor habits, congenital conditions, and inherited conditions
- Auto-enrolls members based on certain diagnostic codes (in HMSA health claims feed data)
- Has support team that includes all medical providers and case managers
- Digests claims feed data and formulates care needs for gaps in care using computer-based rules
- Presents care gaps to physicians and dental network providers
- Allows for personal interventions by HMSA Care Coordination staff
- Compensates the providers to close gaps in care (outcome-based care)

HMSA Dental Ad

Print ad will run in
the winter edition
of *Island Scene*
magazine.

Go the extra **smile** for total health



Taking care of your teeth and gums will put you on the road to good health.

Regular dental visits can prevent or lessen the effects of cavities and gum disease. If untreated, they can lead to bigger problems like infections and tooth loss, which can be painful and expensive to treat.

Need a dental plan?
Visit hmsadental.com.

Achieve your best dental and total health.
HMSA dental and medical plans work together to help you live healthier through our unique Oral Health for Total Health™ program.



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DENTISTRY IN A PANDEMIC

DEFINITIONS

- **Pandemic:** Epidemic of an infectious disease that has spread across a large region
- **Coronavirus:** Any of a group of RNA viruses in humans and others with crown-like spikes on their surface. First identified in the 1960s, there are currently seven that can infect people including SARS and MERS
- **SARS-Cov-2:** Name of the virus causing the current pandemic
- **COVID-19:** Name of the disease

IMPACT ON DENTAL PRACTICE STAFFING

- Government shutdown of non-emergency dental care
- Guidelines altering methods of delivering care
- Additional PPE wear
- Additional PPE ordering
- Pre-visit patient interviews
- Date-of-service patient interviews

IMPACT ON DENTAL PRACTICE FINANCES

- Supplies
- Additional infection control time between patients
- Additional medical history updates
- Total patient visits: Q3 2020 versus Q3 2019
- Interest rates
- Federal loans (PPP, EIDL)
- Bank loans
- Where to cut costs?

FRED



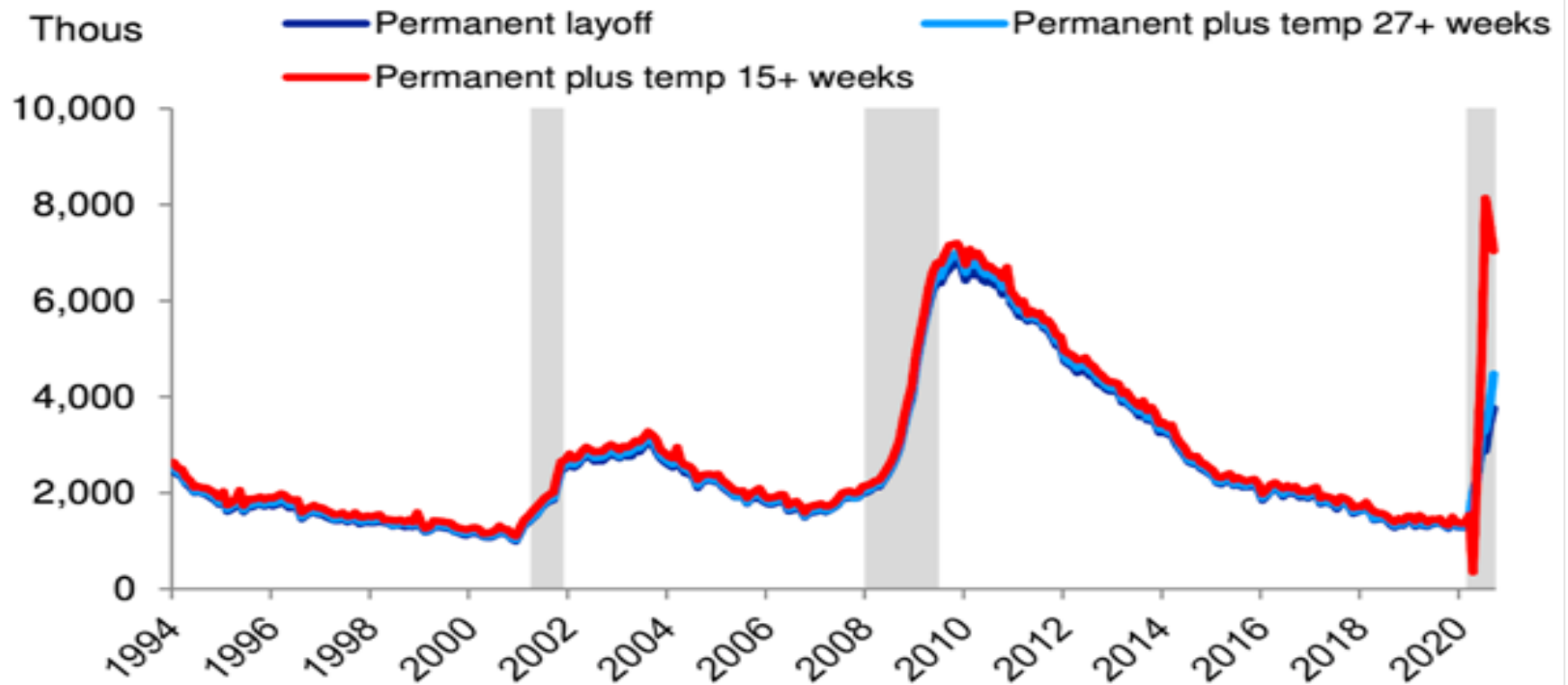
Unemployment Level - Permanent Job Losers



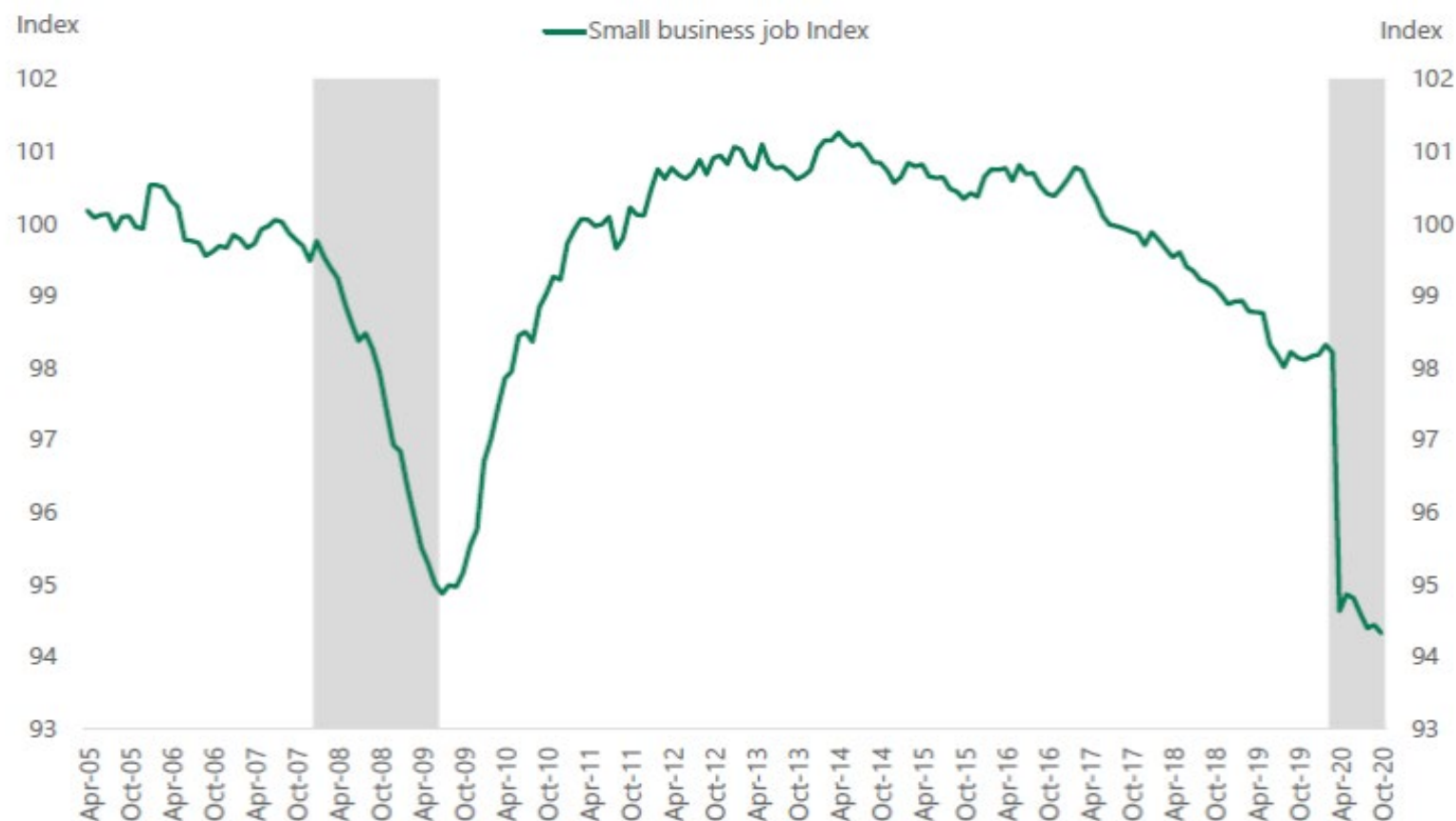
Source: U.S. Bureau of Labor Statistics

fred.stlouisfed.org

Figure 5: Actual permanent layoffs may be much higher given extended unemployment durations for those on temporary layoff



Virus having significant impact on employment in small businesses

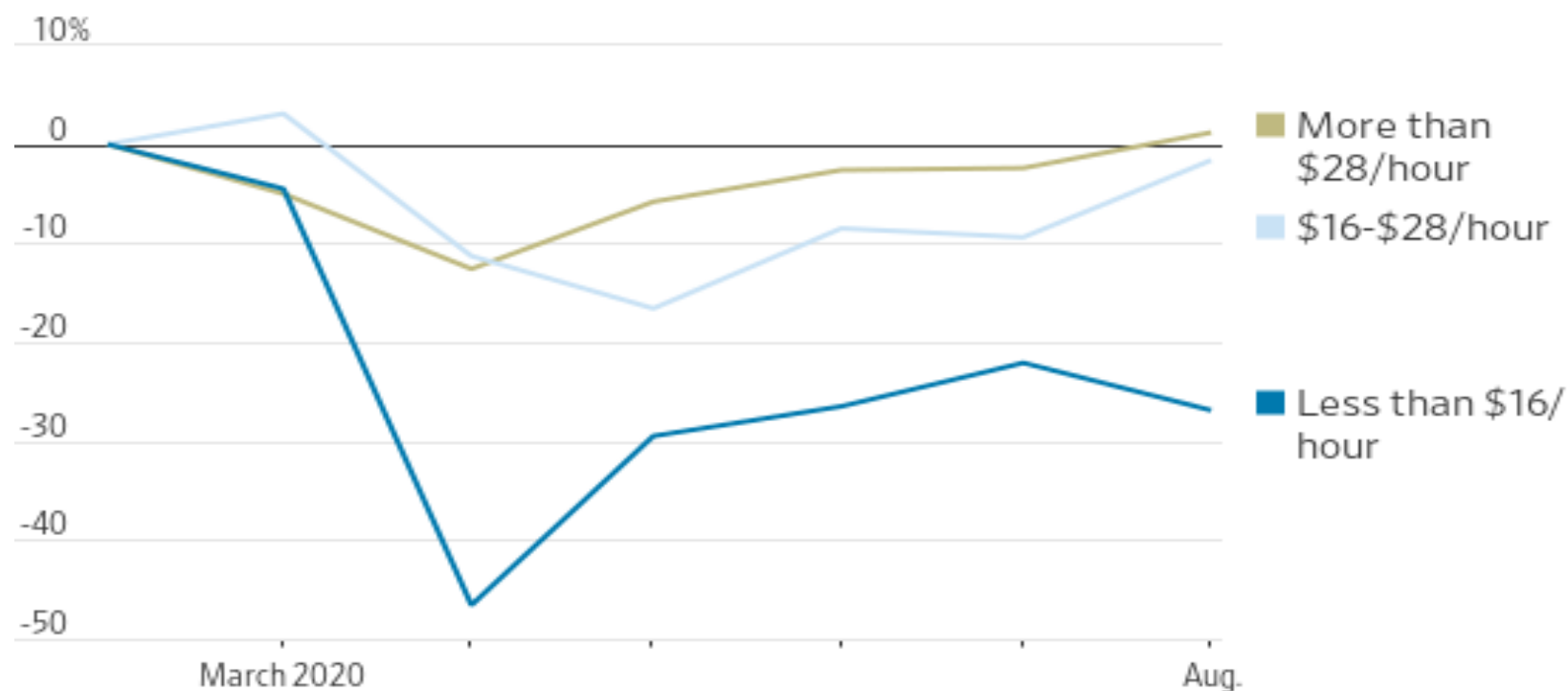


Source: Paychex, Apollo Global Management

APOLLO

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Change in number of workers earning various wage ranges, from February 2020



Note: Seasonally adjusted
Source: Evercore ISI

FIGURE A

The 1963 March on Washington's minimum wage demand would be close to \$15 today, adjusted for inflation

Historical and projected federal minimum wages under \$15 in 2025, and the 1963 March on Washington demand indexed to inflation

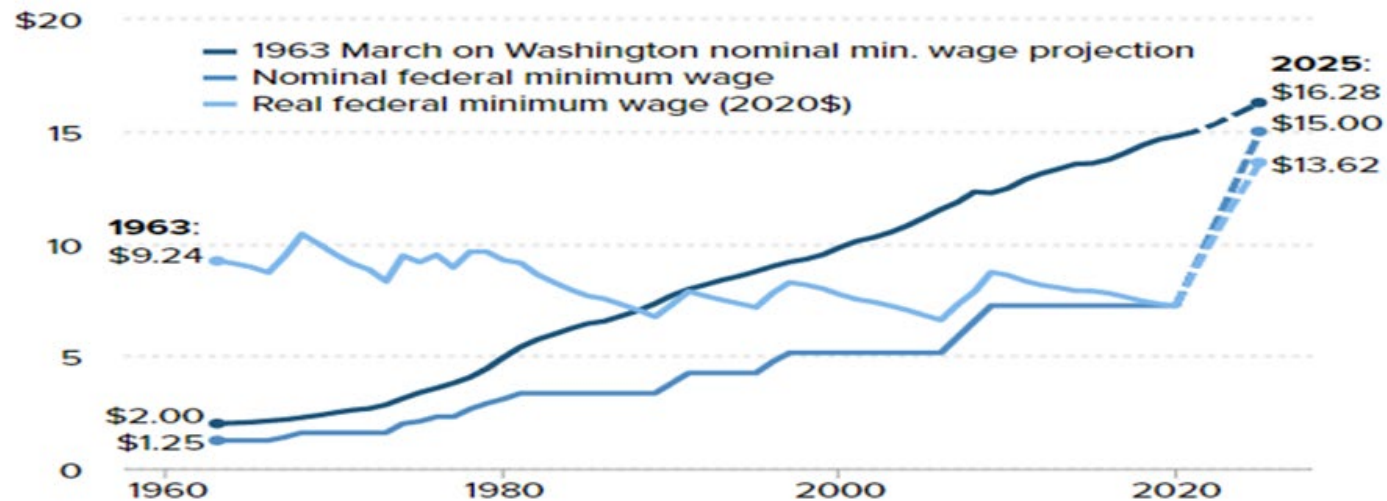


Chart Data

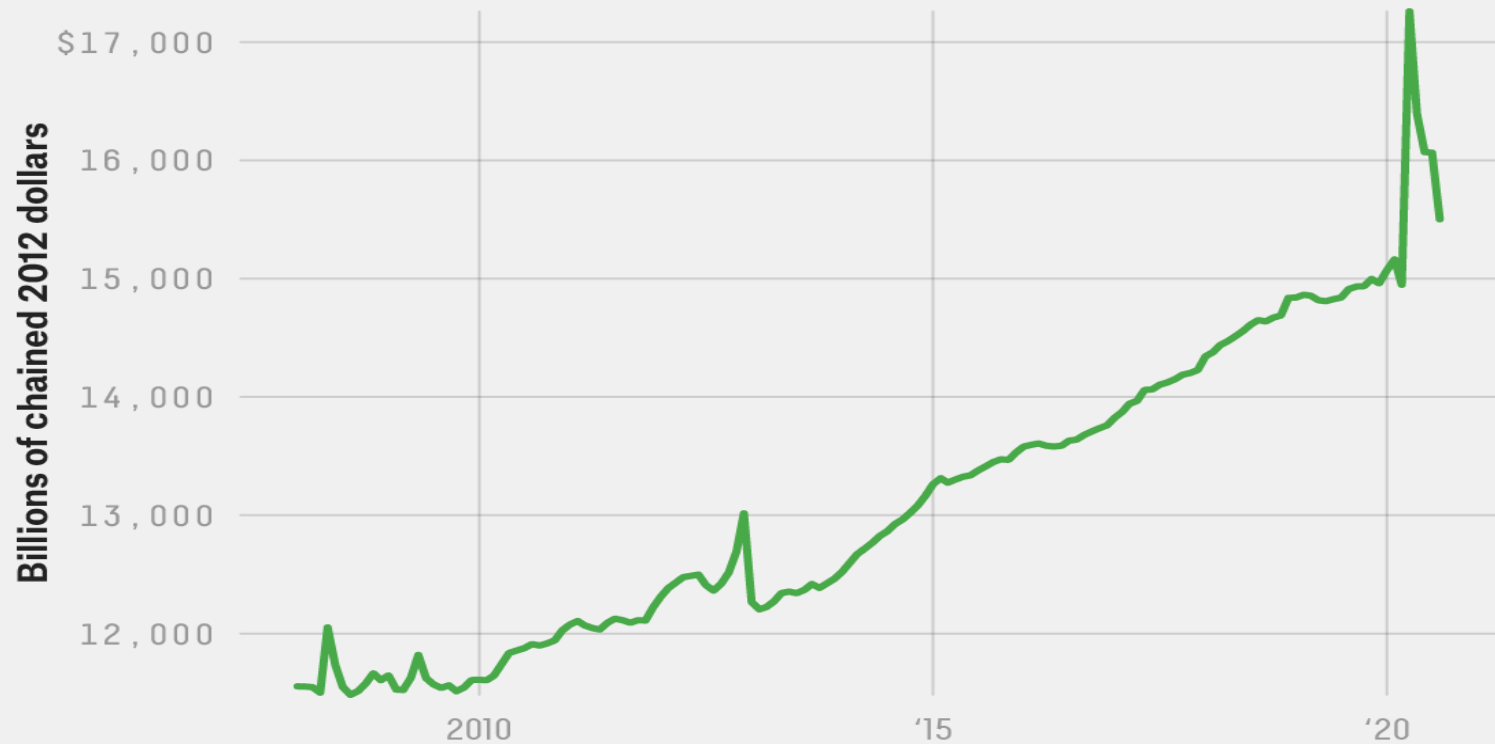
Notes: Historical inflation adjustments use the CPI-U-RS (1978-2019), chained to the CPI-U-X1 (1967-1977) and CPI-U (1963-1966). Projections for inflation use Congressional Budget Office, An Update to the Economic Outlook: 2020 to 2030, "[10-Year Economic Projections](#)" (downloadable Excel file supplement), July 2020

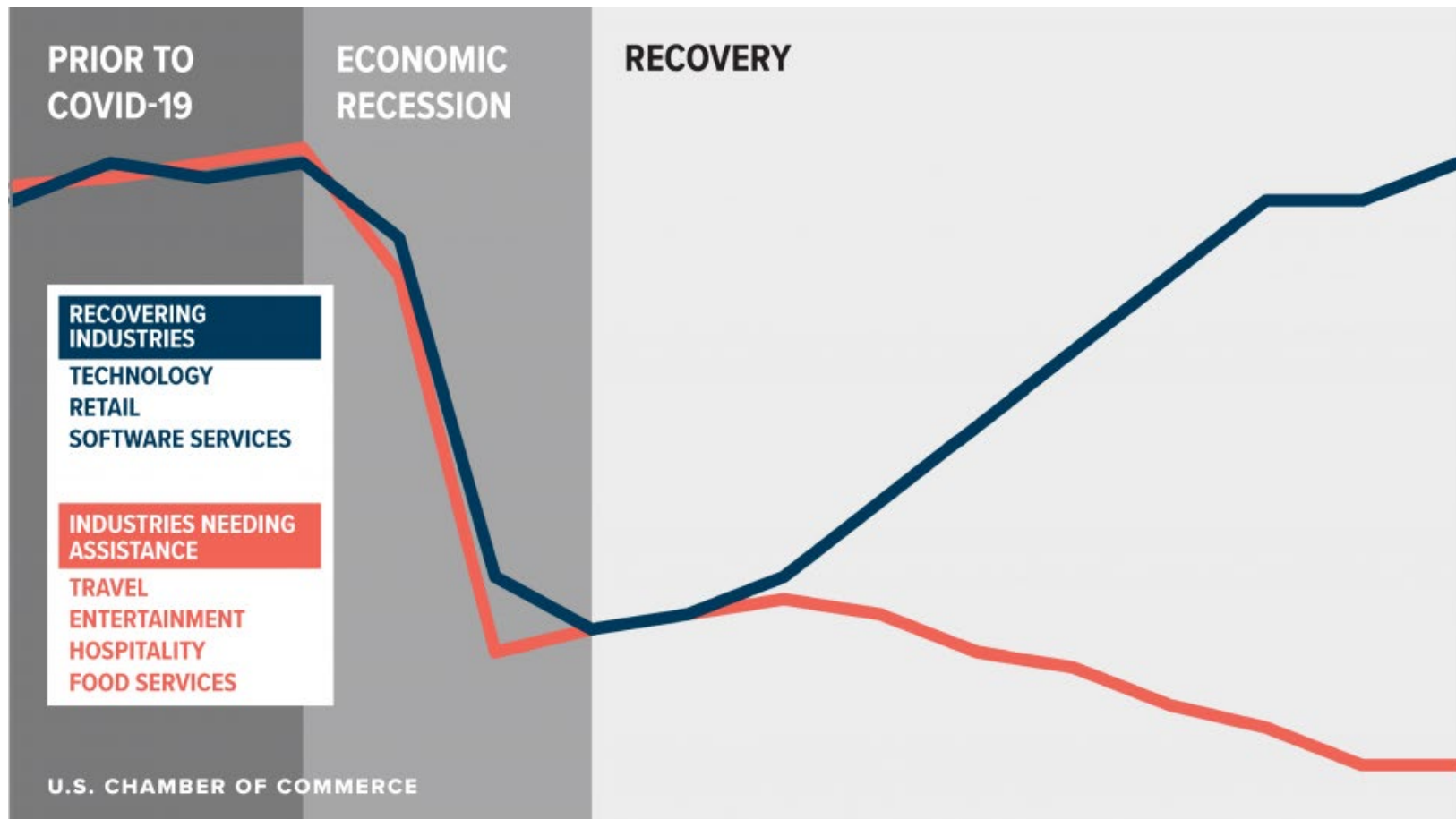
Sources: EPI analysis of the Fair Labor Standards Act and amendments, a \$15 minimum wage target by 2025, and the 1963 March on Washington for Jobs and Freedom minimum wage [demand](#).

Economic Policy Institute

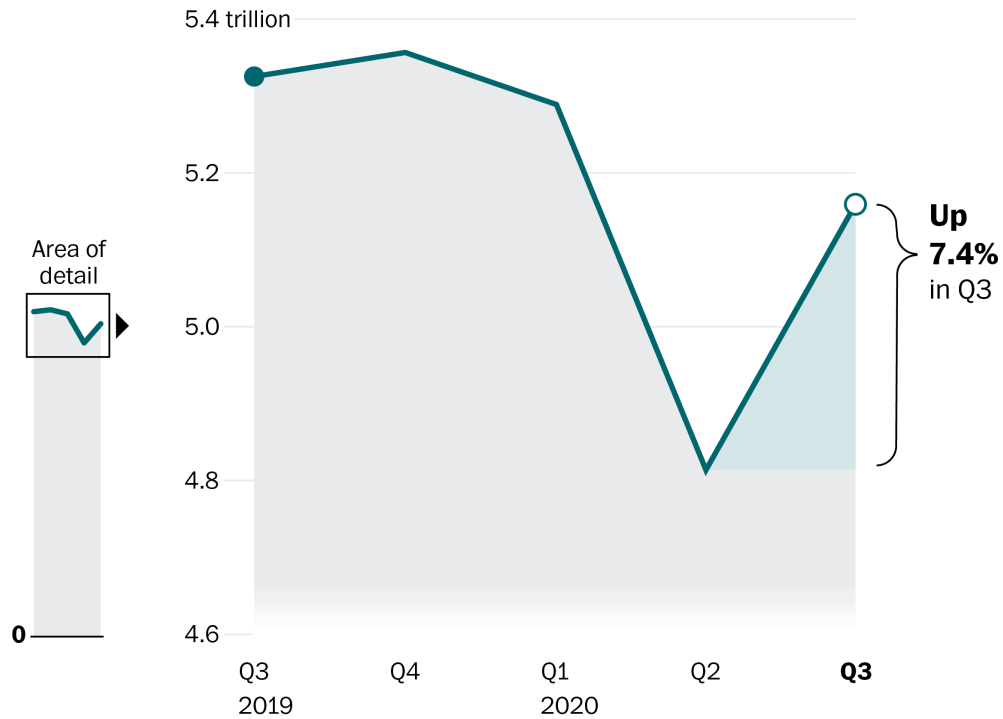
Disposable income was rising — until it wasn't

Real disposable personal income, in billions of chained 2012 dollars, seasonally adjusted rate





Quarterly U.S. GDP, adjusted for inflation

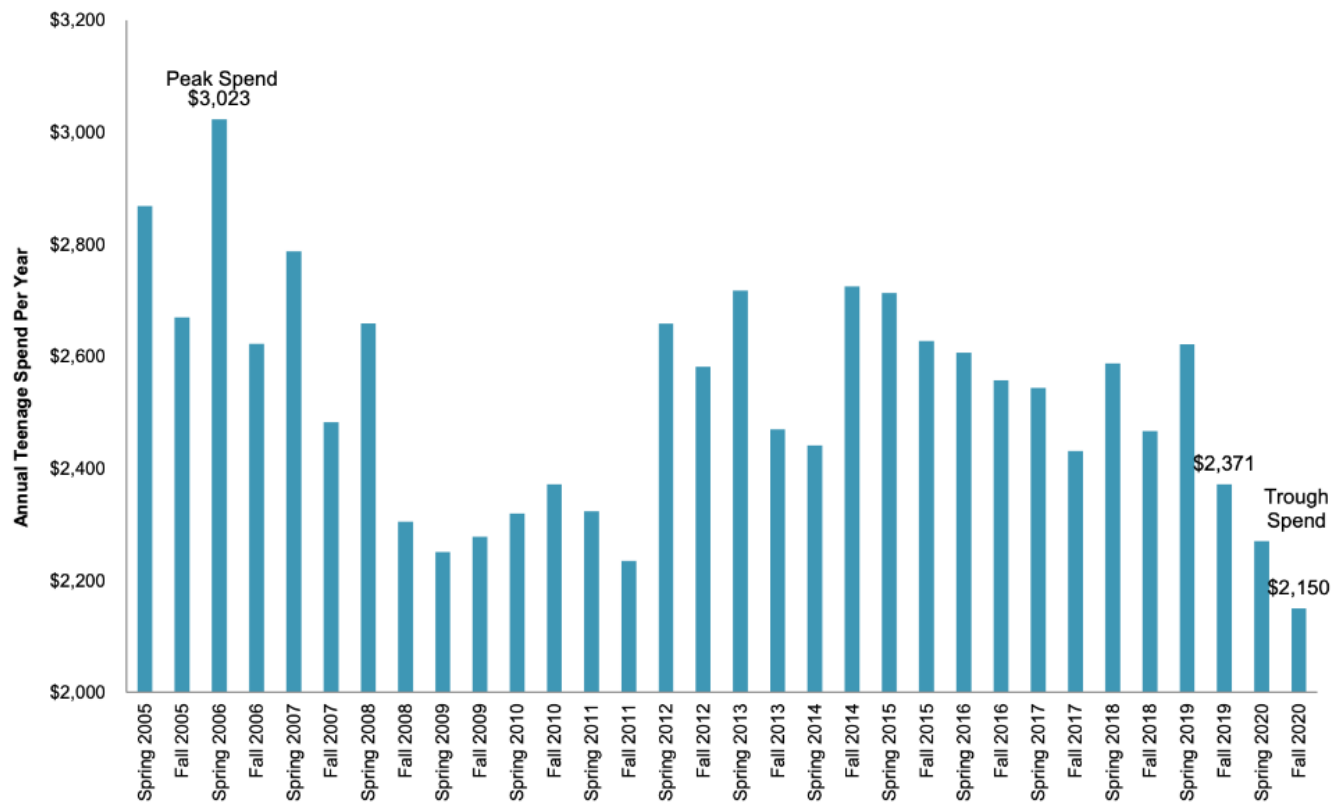


Note: Seasonally adjusted
Source: Commerce Department

THE WASHINGTON POST

Teen Spending Down 9% Y/Y & Down 5% Vs. Spring

All Teens



COVID-19 AS OF NOVEMBER 7, 2020

- **In the past week in the U.S....New daily reported cases rose 22.4%**
- **New daily reported deaths rose 18.9%**
- **Covid-related hospitalizations rose 17.8%**
- **Among reported tests, the positivity rate was 7.3%.**

HAWAII COVID CASE COUNT

By The New York Times Updated November 8, 2020, 1:15 A.M. E.T.

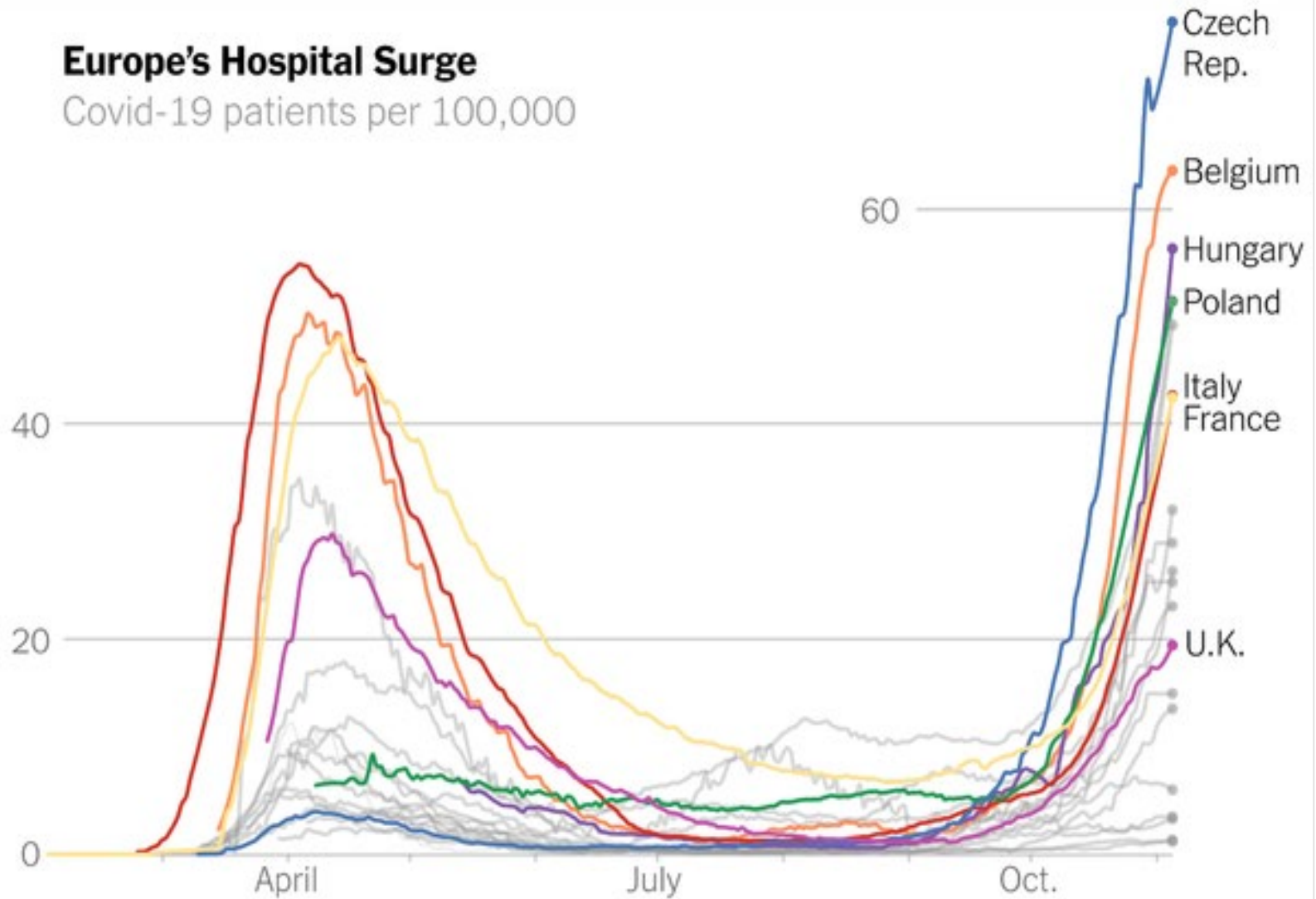
	TOTAL	NOVEMBER 6	14-DAY CHANGE
Cases	15,939	123	+21%
Deaths	219	1	−96%
Hospitalized		69	−27%

HAWAII COVID CASE COUNT BY COUNTY (November 7 12:54 am EST)

•	Total	Per	Daily last	Per
•		100k	7 days	100k
• Hawaii	15,816	1,117	95.9	6.8
• Hawaii	1,386	688	16.6	8.2
• Honolulu	13,682	1,404	73.6	7.5
• Maui	678	405	4.9	2.9
• Kauai	70	97	0.9	1.2

Europe's Hospital Surge

Covid-19 patients per 100,000



HYGIENE-SPECIFIC COVID-19 CONCERNS

- Infection control at beginning of treatment day
- Patient interview
- Patient care:
 - Aerosols
 - Scaling
 - Polishing
- Infection control between patients
- Infection control at end of day

HOW DO PANDEMICS END?

- Herd immunity
- Vaccinations
- Lack of community spread
- Regionally or locally based
- ... with a whimper
- Historical rebounds
- Societal changes

LONG-TERM IMPACT ON DENTAL HYGIENISTS

- Average time per patient visit
- Continuous mask wearing
- In-office COVID-19 patient and staff testing
- Vaccination requirements versus recommendations
- Potential for generational shift in workforce
- Income levels
- Workflows
- Secondary health concerns

POLITICS AND THE EFFECT ON DENTAL HYGIENE AND HEALTH CARE

PUBLIC HEALTH RESPONSE TO PRESIDENTIAL ILLNESS

- Reduced respect for scientific process and study.
- Increased reliance on untrained opinions and voices.
- Willingness to accept opaque, incomplete or altered presentation of facts.
- Continued politicalization of public health recommendations.

POST-ELECTION PUBLIC HEALTH (TRUMP)

- Reduced federal leadership and guidance
 - Elimination of Executive Branch planning and support
 - Executive Order issued on October 21, 2020 to change ability to dismiss previously protected classes of civil service employees without cause.
 - Decreased funding for pure research
 - Increased reliance on private industry
 - Affordable Care Act?
- Increased responsibility on individual states
 - Inconsistent policies from state to state
 - Marketplace competition for supplies in emergencies
 - Financial shortfalls and reductions in force
- People do not vote based on public health, but based on what they perceive is best for them economically

POST-ELECTION PUBLIC HEALTH (BIDEN)

- Increased federal leadership and guidance
 - Re-creation of Executive Branch planning and support including Global Health Security and Biodefense unit disbanded in May, 2018
 - Greater reliance on scientific measures. Will strongly encourage each state to follow mask mandates.
 - A national work from home order (where possible) and decreased capacity in restaurants, bars and public meeting spaces. Maintenance of the economy.
 - Bipartisan input to federal planning
 - National purchasing clearinghouse for PPE
 - Increased reliance on academic research
 - Affordable Care Act unchanged except for possible SCOTUS ruling
- People do not vote based on public health, but based on what they perceive is best for them economically

PREPARING FOR THE NEXT PANDEMIC

- Stockpiling inventory and supplies by each entity and state
- Decision making and workflows for state and local governments, including Departments of Health
- Businesses will keep more cash on hand and open lines of credit
- Businesses will create slowdown and shutdown plans
- Savers will plan for income interruption

PREPARING THE DENTAL OFFICE FOR THE NEXT WAVE OF THIS PANDEMIC

- Stockpiling inventory and supplies with back-up plans
- Protocol for limiting contact with potentially infectious patients
 - A University of Arizona study found that a rapid COVID-19 test produced accurate results only 32% of the time when used on asymptomatic subjects.
- Protocol for limiting contact with potentially infectious staff members
- Maintain more cash on hand and open lines of credit
- Create slowdown and shutdown plans
- Plan for income interruption

WHAT SHOULD DENTAL HYGIENISTS BE DOING TODAY?

- Determine the short-term and long-term viability of employer's business model and finances
- Confirm that infection control guidelines are being followed by all staff members
- Discuss personal productivity with business owner or manager
- Identify your flexibility in work hours and personal responsibilities

WHAT SHOULD DENTAL HYGIENISTS DO TO PLAN FOR THE FUTURE?

- Create an exercise plan. Get healthy and stay healthy.
- Develop a career track and an end to career plan
- Retirement funding and goals
- Consider being an Independent Contractor if working for multiple employers
- Vaccinate or not vaccinate?
- Re-examine your professional and personal lives on a regular basis

THE FUTURE OF THE PRACTICE OF DENTAL HYGIENE

National and State-Level Projections of Dentists and Dental Hygienists in the U.S., 2012-2025

February 2015

U.S. Department of Health and Human Services

Health Resources and Services Administration

Bureau of Health Workforce

National Center for Health Workforce Analysis

Exhibit 4: Baseline and Projected Supply of and Demand for Dental Hygienists: 2012-2025 (Hawaii)

2012 Supply & Demand	846
2025 Projected	
Supply	1,112
Demand	927
Difference	- 175

Conclusion Bias – National shortfall of 15,600 dentists and oversupply of 28,100 hygienists.

Best Practice Approaches for State and Community Oral Health Programs

Date of Report: March 2019

Demographics: The dental hygiene workforce is comprised mainly of women (97%) with approximately 80% White, 9% Hispanic, 5% Black or African American, and 3% Asian. This does not reflect the general makeup of the overall U.S. population.

PRACTICE SETTINGS

- Traditional private practice
- DSO
- Invisible DSO
- Public Health
- Non-dental corporate employer
- Non-traditional hours
- Non-clinical positions

WORKFLOW

- Lowest cost staff members taking on more responsibilities
- Delegation of tasks
- Interviews, medical histories, and radiographs
- Scaling
- Polishing, flossing, and probing
- Reviewing treatment plans and dismissal
- Hygiene assistants
- Non-clinical team members
- Supply and demand

HYGIENIST-PATIENT INTERACTION

- Dependent on practice setting
- Opportunity to expand patient education
- Medical
 - Fewer intraoral exams by physicians
- Dental
 - Potential increase in dental needs due to masks
 - Potential increase in cosmetic dentistry due to videoconferencing
- Workplace satisfaction
- Marketplace changes

RESEARCH -A Prospective Cohort Study of Bisphenol: A Exposure From Dental Treatment

- Published in Clinical Dentistry
- Journal of Dental Research · October 27, 2020
- In this prospective cohort study of 194 children receiving dental treatment with Bis-GMA–based materials (average, 7.5 surfaces), a statistically significant 86% increase in urinary BPA (uBPA) concentrations between pretreatment and 2-day post treatment was observed

RESEARCH -A Prospective Cohort Study of Bisphenol: A Exposure From Dental Treatment (page 2)

- BPA leaches from Bis-GMA–based dental materials at detectable levels, and it is an endocrine-disrupting chemical that can affect brain and reproductive development.
- Overall, 85% of composites use BPA derivatives, and Bis-GMA is an ingredient in two-thirds of dental sealants, with sealants accounting for as much as 17% of BPA exposure in children.

UNKNOWN

- Fluoride
- Complications from mask wearing
- Opportunities from many people being on camera
- Mid-level providers
- Future pandemics
- Interruptions to care and income

QUESTIONS FROM THE CHAT ROOM

