TÜRK PEDİATRİ ARŞİVİ
TURKISH ARCHIVES of PEDIATRICS

Review

Child healthcare in Israel: current challenges

Eli Somekh[1,2], Shai Ashkenazi[3], Zachi Grossman[4]

[1]Department of Paediatrics, Mayaney Hayeshuah Medical Center, Bnei Brak and Sackler School of Medicine, Tel Aviv University, Israel
[2]European Paediatric Association, Union of National European Paediatric Societies and Associations, Berlin, Germany
[3]Adelson School of Medicine, Ariel University and Schneider Children's Medical Center, Petach Tikva, Israel
[4]Maccabi Healthcare Services, Tel Aviv and Adelson School of Medicine, Ariel University, Ariel, Israel

Abstract

The article describes and discusses several key elements of the paediatric healthcare system in Israel, including paediatric training, family and community paediatrics, hospital-based paediatric services, preventive care services, and special programs such as the "Drop of Milk" (Tipat Halav) program. Although child care in Israel has gained several notable achievements, such as a low infant mortality rate, there are several significant challenges for the coming years. These include training of enough paediatricians and periodic updating of training programs to fulfil needs and provide an adequate preventive care from fetal life through infancy, childhood, and adulthood. In addition, paediatricians in Israel should continue to be involved in national public health programs to reduce health inequities among mothers and children and reduce health disparities among certain geographic areas and various populations. Graduates of paediatric residency are expected to be able to address the new technologies, the requirements for personal medicine and on-line medicine, and to be able to deal with both pure "medical" issues, and public health, lifestyle, and environmental issues.

Keywords: Community, pediatrics, public health, training

Paediatricians and paediatric training in Israel

According to the most recent report (July 2019) of the Ministry of Health, of the 29,581 physicians aged under 67 years (the official retirement age) in Israel at the end of 2018, 2362 (8%) were board-certified licensed paediatricians, of whom 53% were females (1). This figure does not represent all practicing paediatricians because many Israeli paediatricians continue to practice (full or part time) after the official retiring age of 67 years. However, with a relatively high fertility rate of 3.1 children/mother, about 33% (nearly 2.8 million) of the Israeli population are children <18 years (2). The ratio of paediatricians aged <67 years per 1000 children is 0.8, similar to the rate in 2014, with a shortage of paediatricians mainly in the community. Most (>75%) children in the community are treated by paediatricians, and the rest by family practitioners (2, 3).

Paediatric residency in Israel is structured and strictly supervised by the Scientific Council of the Israel Medical Association. The residency lasts 4.5 years, with about 27 months spent in university-affiliated inpatient hospital departments, and 6 months training in an ambulatory paediatrics, either in primary care paediatric clinics in the community or ambulatory paediatric services within the teaching hospitals (2, 3). In addition, a mandatory 6 months of the training are devoted to research, either in basic science or in clinical research.

Recently, an emphasis towards competency-based medical education, with the aid of medical simulation, has been taken (4). Also, while traditionally the residency in Paediatrics was focused on educating graduates mainly with scientific knowledge and experience in different illnesses and malformations, there has been a growing demand to revise the paediatric curriculum so that paediatric graduates will be able to successfully address the new morbidities in paediatrics, such as obesity, disabilities, and mental health, as well as public health issues (2, 3, 5). Sub-specialty training in the various paediatric fields is well developed and strictly supervised by the Scientific Council, and attended by increasing percentages of Israeli paediatricians.

In 2017 and 2018, 146 and 141 physicians, respectively, started their residency in paediatrics; these numbers are about 50% higher than 10 years ago. Indeed, the number

Cite this article as: Somekh E, Ashkenazi S, Grossman Z. Child healthcare in Israel: current challenges. Turk Pediatri Ars 2020; 55(Suppl 1): S57–S62.

Corresponding Author: Eli Somekh E-mail: esomekh@gmail.com

DOI: 10.14744/TurkPediatriArs.2020.97345

of licensed paediatricians in Israel aged under 67 years increased to 2514 in September 2019 (Israel Scientific Council, personal communication). It is hoped that this trend, with additional complementary steps, will help to solve the shortage of paediatricians in the community.

Community paediatrics

In 1975, Robert Haggerty, a paediatrician from Rochester, United States, originated the term "the New Morbidity" in paediatric medicine (5). The American Academy of Paediatrics (AAP) endorsed this concept that reflects comprehensively the developmental, emotional, and psychosocial problems of children (6–7), the burden of which has increased dramatically in recent decades (8). According to various estimates, over 20% of children who visit community paediatric clinics for any reason have one of the problems included in the concept of new morbidity (9).

According to a recent policy statement by the AAP, this change in morbidity requires the adaptation of child healthcare services provided by paediatricians in the community in several aspects (10). Training paediatric residents must include exposure to this morbidity, through rotations in the paediatric community clinics during residency, in order to give them knowledge and tools that will enable optimal management of psychosocial morbidities. Addressing new morbidity issues by paediatricians is time consuming. The provision of services by paediatricians in the community should therefore be redesigned, in terms of both visit times and reimbursement, to allow for effective delivery of services related to psychosocial morbidities. Creating collaborative interfaces with other stakeholders of child health, such as the education and welfare systems, can also have a strategic impact on the comprehensive management of these children.

In Israel, there is currently limited exposure of paediatric residents to community paediatrics during residency, and therefore the knowledge and skills necessary for handling new morbidity issues is missing. In addition, the lack of exposure of residents to community paediatrics causes this aspect of the profession to be perceived as dull and boring, also lacking aspects that create prestige in hospital paediatrics: research, teaching, academic promotion. As a result, at the end of their training, most young residents do not want to be fully employed in the community – despite the high salaries offered to them by the Israeli healthcare providers, the HMOs (health maintenance organizations). This may explain the shortage of paediatricians in the community (11, 12).

The financial model of service provision also does not meet the needs of the new morbidity. Because of the competition between HMOs, their immediate interest is to provide maximum availability of paediatricians for acute care conditions. Therefore, the main incentive for reimbursement in all four HMOs is volume-based. As a result, due to short visit times, children with emotional and psychosocial developmental problems cannot be properly taken care of by paediatricians, and thus are often referred to other healthcare professionals. This leads to fragmentation of care of the more vulnerable paediatric population, children who most need paediatricians. The volume-based reimbursement model is also responsible, in part, for the under development of additional domains that can diversify and enrich the career of a paediatrician and decrease burnout – research, teaching, and management (13).

An International Workshop organised with the Israel National Institute for Health Policy Research (NIHPR), "The Future of Community Child Healthcare," was held in June 2019. The workshop focused on the following issues: training paediatric residents, creating career pathways for paediatricians in the community in order to attract residents, building an interface with other community stakeholders, examining the current reimbursement model, and searching for possible solutions to the shortage of paediatric workforce in the community. Three world leaders in community paediatrics were invited as speakers. Prof. Richard Wasserman, a former director of the American Paediatric Research in Office Setting Network (PROS), highlighted research as an attractive career pathway for paediatricians in the community. Prof. Frank Oberklaid, the Director of the centre for community child health in Melbourne Australia, discussed the leadership role of paediatrics in child health and wellbeing, and Prof. Mitch Blair from Imperial College London presented integrated care involving all relevant stakeholders as a path leading to improved child health. The other speakers were policy makers from both the Ministry of Health and the four HMOs. At the end of the workshop, official recommendations were presented (Table 1), and a panel of all four CEOs of the HMOs concluded the conference. In this panel, an important declaration was made by all four CEOS stressing the importance and commitment of ambulatory rotation during paediatric residency and their willingness to allocate budget for obligatory block rotations in community paediatrics for all paediatric residents in Israel.

This agreement, if finally fulfilled, might change the perspective among residents towards community paediatrics, increase its attractiveness, and eventually might lead to changes also in the bigger picture – a more relevant financial service model and a better care of children suf-

Table 1. Recommendations by the Israel National Institute for Health Policy Research for the development of effective community child health care

Training of healthcare professionals

a. Pediatricians:
- Medical School
  - Enhanced formal exposure to community paediatrics
- Residency
  - Mandatory rotation of 6 months in community paediatrics (pending HMOs funding)
  - Programs in environmental paediatrics
- Post-Residency
  - Development of community paediatrics subspecialty fellowship

b. Nurses:
- Expanding the role of the "drop of milk" procedure (Tipat Halav)
- Implementing the training of nurses in paediatrics

Development of community pediatric clinic

a. Recruitment of highly qualified paediatric workforce by developing career pathways:
- Research and academic
- Administration
- Advocacy

b. Specific areas of intervention:
- Preventive care
- Health promotion
- Chronic diseases management
- Developmental screening
- Psychosocial interventions

c. Developing a comprehensive care model (paediatrician as pivot):
- Nurses
- Different health professionals (i.e. social workers, psychologist)

System changes and reforms needed

a. HMOs:
- Allocating time realistically for the specific areas of intervention
- Ensuring adequate reimbursement for the activities performed

b. Government and municipalities:
- Establishing a child health section in the Ministry of Health and in HMOs
- Allocating advocacy roles for community paediatric leadership in municipal and intergovernmental committees

fering from the new morbidity. This is substantial progress of the existent situation where there is no financial arrangement for ambulatory rotation of residents and may comply with the plan described in the journal here previously (2).

In order for this plan to succeed, the teaching ambulatory clinics in Israel should adapt themselves for resident instruction, including allocation of senior staff time and equipment for teaching and complying with the requirements and the syllabus of the Israeli Paediatric Association and the Scientific Council of Israeli Medical Association.

Well baby childcare: "Drop of Milk" (Tipat Halav) Program

The Network of maternal and child health clinics in Israel is called "Drop of Milk" (Tipat Halav), and it provides free of charge preventive care for all children from birth to age 5 years. Sixty-four percent of children are receiving the service at government-funded clinics, and the rest are being cared for at HMOs or municipality-funded clinics. It is widely used by populations from all social classes and ethnic groups and it is estimated that 97% of all infants born in Israel use this service during the first 2 years after birth (14). The services provided by Tipat Halav (15) are reported in

Table 2. Services provided by the "drop of Milk" program (Tipat Halav)

- Administration of vaccines according to the routine immunisation schedule, that currently covers 15 different pathogens and is provided free of cost in the preventive clinics and schools.
- Growth and developmental surveillance.
- Breastfeeding support.
- Screening for postpartum depression.
- Community-based intervention programs, such as Healthy Steps for first-time parents, Good-enough Parents, Adaptation of the HENRY (Health Exercise Nutrition for the Really Young) program

Table 2. The "Tipat Halav" has been an important resource during health emergencies such as measles outbreak during 2018–2019 and circulation of wild poliovirus in Israel in 2013–2014 (16). Public health nurses are the primary care providers, with periodic support by paediatricians. Due to its achievements, Tipat Halav network was awarded with the World Health Organization award in 1998.

Funding of service: the government is mainly responsible for funding and the provision of the service. However, despite the accomplishments of preventive care, there are no clear regulations on how to fund the service and no mechanism exists to link its funding to the growth of the paediatric population. Preventive services are under financial strain affecting both the scope and quality of service, and ensuring adequate funding is the greatest challenge facing preventive paediatric care today (17). Due to financial constraints and uncertainty regarding the scope of the service and its extent, the Director General of the Israeli Ministry of Health appointed a special committee to recommend a desirable model of operating of "Tipat Halav" clinics. The committee reviewed several aspects of the service including the followings: (a) What is the scientific basis for early prevention and education?; (b) What should be the extents of the service? (c) Should it also include societal, familial, and developmental services or only immunizations and basic screening? (d) Should the government continue to operate this universal preventive care or preventive care, or may it be transferred to the HMO's that provide the routine curative care according to the National Health Insurance Law.

Literature data emphasize the extreme importance medical, social and economic aspects of early infancy care, and provide the scientific basis for early prevention and education. James J. Heckman, Nobel Prize Laureate has stressed that "The highest rate of return in early childhood comes from investing as early as possible, from birth through age five, especially in disadvantaged families," and that "Starting at age three or four is too little too Late!" (18). Economic return from interventions come through reduced costs in special and remedial education, reduced health and criminal justice system expenditures, better future school and career achievement, eventually promoting economic growth. Investing in early childhood education is a cost-effective strategy even during a budget crisis with need to prioritize investment in at-risk children.

Some reasons for these effects are that early instructions and education improve both cognitive skills abilities and non-cognitive skills such as attention, motivation, socialization, impulse control, persistence, and teamwork. Non-cognitive abilities are also important and contribute to shaping children as later productive and valuable citizens who pay dividends for generations to come.

The Perry Preschool program shows a 7% to 10% per year return on investment based on increased school and career achievement, as well as reduced costs in remedial education, health and criminal justice system expenditures, and a 13% return on investment in programs for disadvantaged children (19–21).

Providers of preventive care service

Advantages of governmental funded preventive care include: universality, equality, separation between curative and preventive care, better connection to welfare authorities and national prevention programs, and less vulnerability to the short-term economic considerations of HMOs.

The advantages of preventive care provided by the HMOs include: separation between the regulatory body (government) and providers of service provider (HMOs), better continuity of care due to the direct connection to primary care givers, and the HMO computerised database. The potentially better cost effectiveness of service, and due to the regulations of financial reimbursement in Israel, HMOs have economic drive to invest in early childhood in order to attract young "customers." The main founding principles of the "Tipat Halav" program are described in Table 3.

The EU-MOCHA Project and its lesson learned

Israel participated in the 2015 MOCHA (Models Of Child primary Healthcare Appraised) project, funded by the Eu-

Table 3. The main founding principles of the "Tipat Halav" (Drop of Milk) program

- Tipat Halav as a universal service has been proved a very valuable for the society, especially for a society with a high fertility rate such as Israeli society. In order to have the optimal health, societal and economic advantages this service should provide societal, familial and developmental services and not only immunisations. It is the responsibility of the Israeli Government to fund and maintain the service.
- Instead of concentrating only on the identity of provider(s) of service, the Ministry of Health should concentrate on formulating the standards of service and determine minimal required standards from service operators.
- Tipat Halav nurses will be educated to provide also screening and advisory services in common developmental problems of infants including minor mental disorders, feeding, behavioural and sleep disturbance.
- Other services to be included in Tipat Halav include psychological, physiotherapy, and dietitian advisory services.
- Tipat Halav clinics will be a site for training for residents in Paediatrics in order to increase the prestige and the competence of these clinics and to educate Paediatric residents in common problems of healthy babies.
- Operators of service:
  - There will be no monopoly for operation of this important service. Several operators of service (from public health organizations) may increase the creativity and novelty of service with more financial investments.

ropean Union. Its main goal was to identify the optimal models of primary care for children by assessment of local structural, cultural, sociologic and political dimensions, and by tracing selected conditions (22).

One of the main conclusions of this project was that there was no universally favoured system and the preferred system in each country should adapt to the local socio-cultural and economic conditions to ensure accessibility, capacity, service coordination, and continuity and should be based on robust evidences (23).

Therefore, we believe that instead of system-centred ideological discussion, we should concentrate on a mechanism that would be as much child-centric as possible. A preferred system may be found by concentrating on child needs and not by adherence to unproved beliefs. In addition, the importance of the early childhood service (as well as other health services) should be based on scientific evidence and therefore continuous collection of data should accompany in order to better shape the service in the future (24).

Recommendations for follow up of the healthy infant

In November 2018, the Israeli Paediatric Association issued recommendations regarding the routine follow-up of healthy newborn and children from the prenatal time until the age of 6 years. These guidelines include recommendations regarding safety measures, screening tests, immunizations, vitamins and dietary supplements, follow-up visits, healthy diet, sleep, and lifestyle (25).

These recommendations are in concordance with the instructions and recommendations distributed to "Tipat Halav" clinics by Ministry of Health officials.

Hospital-based paediatric services

Secondary and tertiary paediatric services are well developed in Israel and administered by 17 medical centres (2, 3). These include 25 inpatient departments of paediatrics and ambulatory clinics in most paediatric fields and day-treatment centres. The departments of paediatrics were traditionally located within general hospitals. However, in recent decades, children's hospitals have been built throughout the country, in which advanced paediatric services, such as organ (heart, lung, liver, kidney) and bone marrow transplantations, interventional cardiac catheterisations, genetic evaluations, and gene-based therapy are given. The main problems in these paediatric centers are the shortage in positions that are needed to supply the advanced growing paediatric services.

A view to the future

While child care in Israel has gained several notable achievements, such as a low infant mortality rate, there are several significant challenges for the coming years. These include training of enough paediatricians and periodic updating of the training program to fulfil the needs and provide an adequate preventive care from foetal life through infancy, childhood, and adulthood.

In addition, paediatricians in Israel should continue to be involved in national public health programs to reduce health inequities among mothers and children, and reduce health disparities among certain geographic areas and various populations. Graduates of paediatric residency are expected to be able to address the new technologies, the requirements for personal medicine and on-line medicine, and to be able to deal with pure 'medical' issues and with public health, lifestyle, and environmental issues.

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

Financial Disclosure: The authors declared that this study has received no financial support.

References

1. https://www.health.gov.il/PublicationsFiles/manpower2018.pdf
2. Somekh E, Katz M, Grossman Z. Planning the paediatric workforce in Israel. J Pediatr 2019; 206: 308–9.
3. Tasher D, Rubin L, Grossman Z, et al. Child health care in Israel. J Pediatr 2016; 177S: S107–15.
4. Sagi D, Pessach-Gelblum L, Divon-Ophir O, et al. Simulation as a training and assessment tool for competency based medical education – a regulatory challenge.[Article in Hebrew]. Harefuah 2019; 158: 674–9.
5. Haggerty RJ. Community pediatrics: past and present. Pediatr Ann 1994; 23: 657–63.
6. American Academy of Pediatrics Committee on Psychosocial Aspects of Child and Family Health: Pediatrics and the psychosocial aspects of child and family health. Pediatrics 1982; 70: 126–7.
7. Committee on Psychosocial Aspects of Child and Family Health. American Academy of Pediatrics. The new morbidity revisited: a renewed commitment to the psychosocial aspects of pediatric care. Committee on Psychosocial Aspects of Child and Family Health. Pediatrics 2001; 108: 1227–30.
8. Kelleher KJ, McInerny TK, Gardner WP, Childs GE, Wasserman RC. Increasing identification of psychosocial problems: 1979-1996. Pediatrics 2000; 105: 1313–21.
9. Horwitz SM, Leaf PJ, Leventhal JM, Forsyth B, Speechley KN. Identification and management of psychosocial and developmental problems in community-based, primary care pediatric practices. Pediatrics 1992; 89: 480–5.
10. American Academy of Paediatrics, Committee on Psychosocial Aspects of Child and Family Health. The future of paediatrics: mental health competencies for paediatric primary care. Paediatrics 2009; 124: 410–21.
11. Porter B, Urkin J. Community pediatrics in Israel: time for change?. Isr Med Assoc J. 2011; 13: 133–6.
12. Kuint J, Porter B. Community paediatrics in Israel during the next decade - A need for a change. Harefuah 2018; 157: 646–9.
13. Grossman Z, Chodick G, Kushnir T, Cohen HA, Chapnick G, Ashkenazi S. Burnout and intentions to quit the practice among community paediatricians: associations with specific professional activities. Isr J Health Policy Res 2019; 8: 2.
14. Rubin L, Belmaker I, Somekh E, et al. Maternal and child health in Israel: building lives. Lancet 2017; 389: 2514–30.
15. Willis TA, Roberts KP, Berry TM, Bryant M, Rudolf MC. The impact of HENRY on parenting and family lifestyle: A national service evaluation of a preschool obesity prevention programme. Public Health 2016; 136: 101–8.
16. Grossman Z, Grotto I, Tasher D, Stein M, Kaliner E, Somekh E. Learning across borders: Advocacy of pediatricians in public health response during a recent wild poliovirus transmission in Israel. J Pediatr 2014; 165: 1278–9.
17. Zimmerman DR, Verbov G, Edelstein N, Stein-Zamir C. Preventive health services for young children in Israel: historical development and current challenges. Isr J Health Policy Res 2019; 8: 23.
18. Heckman JJ. Invest in Early Childhood Development: Reduce Deficits, Strengthen the Economy. 2012. Availableat:https://heckmanequation.org/resource/invest-in-early-childhood-development-reduce-deficits-strengthen-the-economy/.
19. Young EM. Early Child Development: Investing in the future. The World Bank, 1996. Available at: http://documents.worldbank.org/curated/en/582711468771287347/Early-child-development-investing-in-the-future.
20. Heckmans JJ, Stixrud J, Urzua S. The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior. Labor Economics 2006; 24: 411–82.
21. Heckman JJ. Schools, Skills, and Synapses. Econ Inq 2008; 46: 289.
22. MOCHA. Models of Child Health Appraised. Planning a healthy future for Europe's population. https://www.childhealthservicemodels.eu/. Accessed 17 November, 2019.
23. Blair M, Alexander D, Rigby M. Critical factors for child primary: child-centricity, core principles and context sensitivity. Arc Dis Child 2019; 104: A12.
24. Kuo AA, Inkelas M, Lotstein DS, Samson KM, Schor EL, Halfon N. Rethinking well-child care in the United States: an international comparison. Pediatrics 2006; 118: 1692–702.
25. Clinical Guidelines. Available at: https://www.ima.org.il/userfiles/image/clinical_97_HealthBoy.pdf.