

1 **Title:** Public Health Longitudinal Integrated Foundation Training (LIFT) program: A Junior Doctor's Experience

2
3 **Article type:** Experience

4
5 **Author names:**

- 6 1. Dawn Celine Siaw Chern Poh
- 7 2. Sarah Andrews
- 8 3. Ushan Andrady

9
10 **Degrees and Affiliations:**

- 11 1. MBBS, MRes. Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Wales, United Kingdom.
- 12 2. MPH. Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Wales, United Kingdom.
- 13 3. MBBS. Ysbyty Gwynedd, Betsi Cadwaladr University Health Board, Wales, United Kingdom.

14
15 **ORCID (Open Researcher and Contributor Identifier):**

- 16 1. Dawn Poh <https://orcid.org/0000-0002-9501-272X>
- 17 2. Ushan <https://orcid.org/0009-0000-4156-9752>

18
19 **About the author:** Dr Poh is a medical graduate, and she completed the Public Health Longitudinal Integrated
20 Foundation Training (LIFT) program as a foundation trainee at Ysbyty Gwynedd (Bangor Hospital) in NHS
21 Wales, United Kingdom. She was the recipient of the NIHR Newcastle Biomedical Science Studentship Award
22 to intercalate for a Master of Research (Cancer) in Newcastle University. She is currently a Research Fellow at
23 Program in Global Surgery and Social Change (PGSSC) at Harvard Medical School.

24
25 **Corresponding author email:** dawn.poh@outlook.com

26
27 **Acknowledgment:** Not applicable. I declare that all co-authors have made significant contributions to the
28 development, research, and writing of this manuscript.

29
30 **Financing:** Health Education and Improvement Wales in introducing and supporting the Public Health
31 Longitudinal Integrated Foundation Training (LIFT) program at Ysbyty Gwynedd (Bangor Hospital) Betsi
32 Cadwaladr University Health Board.

33
34 **Conflict of interest statement by authors:** There is no conflict of interest in writing this manuscript.

35
36 **Authors Contribution Statement:** Conceptualization: DP. Data Curation: DP. Formal Analysis:
37 DP. Investigation: DP. Methodology: DP. Project Administration: DP, SA. Resources: DP, SA. Software:
38 DP. Supervision: SA, UA. Validation: DP, SA, UA. Visualization: DP. Writing - Original Draft: DP,
39 SA. Writing - Review Editing: DP, SA, UA.

40
41 **Manuscript word count:** 986 words only

1 **Abstract word count:** 164 words only

2 **Number of Figures and Tables:** One (1) figure only. No tables

3

4 **Personal, Professional, and Institutional Social Network accounts.**

- 5 • **Facebook:** <https://www.facebook.com/dawn.p0h>
- 6 • **Twitter:** https://x.com/dawn_p0h
- 7 • **Instagram:** <https://www.instagram.com/dawn.p0h/>
- 8 • **Linkedin:** <https://www.linkedin.com/in/dawn-poh-2329a6331/>

9

10

11 **Dates**

12 Submission: 06/19/2024

13 Revisions: 07/19/2024

14 Responses: 07/19/2024

15 Acceptance: 11/12/2024

16 Publication: 11/19/2024

17

18 **Editors**

19 Associate Editor/Editor: Francisco J. Bonilla-Escobar

20 Student Editors: Dzhaneer Bashchobanov, Rola Mohareb

21 Copyeditor: Adnan Mujanovic

22 Proofreader:

23 Layout Editor:

24

25 **Publisher's Disclosure:** *This is a PDF file of an unedited manuscript that has been accepted for publication.*

26 *As a service to our readers and authors we are providing this early version of the manuscript. The manuscript*

27 *will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable*

28 *form. Please note that during the production process errors may be discovered which could affect the content,*

29 *and all legal disclaimers that apply to the journal pertain.*

30

31

1 **ABSTRACT.**

2
3 This paper aims to present key reflections in a one-year public health Longitudinal Integrated Foundation
4 Training (LIFT) program at Ysbyty Gwynedd (Bangor Hospital) Betsi Cadwaladr University Health Board. The
5 program was supported by Health Education and Improvement Wales. Work experiences include contributing
6 to a preconception care draft strategy, participating in a nuclear power plant decommissioning consultation,
7 attending a Cryptosporidium outbreak meeting, and witnessing the implementation of Wales' 20mph speed
8 limit law. These experiences provided insights into the multifaceted nature of public health work, including
9 health improvement, health protection, and healthcare services. The placement highlighted the importance of
10 interdisciplinary collaboration, evidence-based policymaking, and effective communication in engaging
11 multiple stakeholders in addressing complex health issues. Challenges included balancing clinical
12 responsibilities with LIFT learning opportunities and adapting to the vast scope of preventative care policies.
13 In conclusion, integrating population health knowledge into medical education is crucial in encouraging junior
14 doctors to embrace these opportunities for professional growth in developing new perspectives in the field of
15 public health.

16
17 **Key Words:**

- 18
19 • Education, Medical
20 • Education, Professional
21 • Health, Public
22 • Health, Community
23 • Environment, Preventive Medicine and Public Health
24 • Preventive Medicine
25 • Epidemiology
26 • Social Medicine
27 • Policy, Health
28 • Care Policies, Health
29 • Health Care Economics and Organizations
30 • Health Care Category
31 • Universal Health Care
32 • Diseases, Infectious
33 • Diseases, Communicable
34 • Clerkship, Clinical
35 • Preconception Care
36 • Education, Professional
37 • Legislation, Medical
38 • Accidents, Traffic

39

1 **THE EXPERIENCE**

2
3 Public health encompasses health improvement, health protection, and healthcare services. It adopts a
4 population-centric approach to address social determinants of health and create equitable societies. The Betsi
5 Cadwaladr University Health Board is the local health board responsible for serving North Wales. Public
6 Health Wales is a national agency of the NHS Wales established in 2009 as part of a major restructuring of
7 the health service in Wales. The health board works closely with PHW to implement and operationalize public
8 health initiatives tailored to the needs of communities regionally.

9
10 I participated in a one-year public health Longitudinal Integrated Foundation Training (LIFT) program at Betsi
11 Cadwaladr University Health Board. This program is introduced by Health Education and Improvement Wales
12 and typically comprises general practice (GP) placements that aims to expose trainees to primary care. The
13 new non-GP LIFT in public health offers a broader and more varied exposure to preventative medicine which
14 is often overlooked in the traditional undergraduate medical school curriculum. In the context of this paper, I
15 pursued the public health LIFT to develop a broader understanding into addressing systemic issues to prevent
16 end-stage disease complications with strategic solutions through an upstream approach.

17
18 This paper provides an overview of key reflections drawn from a range of public health experiences which
19 addresses family health, environmental, and regulatory compliance issues during a public health LIFT as a
20 junior doctor.
21

1 **Work in the public health LIFT**

2 Preconception Care Draft Strategy

3

4 The North Wales Preconception Task and Finish group draft strategy provided valuable insights into the
5 implementation of preconception care. As part of this process, I had the opportunity to contribute additional
6 perspectives related to NHS national screening programs, vaccination uptake (such as Human *Papilloma*
7 *Virus* and *Hepatitis B*), and addressing anemia through nutritional supplementation. The Lancet series (2018)
8 reflects this approach to preconception care, emphasizing how preconception health can impact future health
9 and outlining steps to improve health before pregnancy as illustrated in Figure 1.^{1,2} Public health efforts can
10 significantly improve maternal and child health outcomes by targeting women with the greatest preconception
11 health needs, which helps address the principles of inverse care law as described by Hart in 1971.³ This
12 experience has strengthened my understanding of the critical role draft strategies play in the policymaking
13 process to strategically drive societal change.

14

15 Consultation to decommissioning a nuclear power plant station

16

17 Shadowing a consultation regarding the decommissioning of a nuclear power station both as the
18 representatives from the health board, I recognized the complexities in the nuclear-related discourse. The
19 consultation involved discussions among various stakeholders, including local residents and volunteers from
20 healthcare and social work sectors, regarding the historical background of the site and the ongoing
21 decommissioning process. While the discussions relatively addressed most of the concerns foreseen, I
22 noticed one predominant challenge was the use of scientific jargon in presentations, which may have
23 presented difficulties for laymen to fully engage with the information relayed. This consultation was a valuable
24 learning experience as it highlights the importance of plain language in consultation presentations in
25 enhancing public engagement throughout the decision-making process. It will be crucial to bridge the gap
26 between accessibility, technical expertise and needs of the local community to ensure that final decisions are
27 representative of the health-specific concerns of individuals directly affected by the changes in local
28 environmental health policies.

29

30 Meeting on *Cryptosporidium* Outbreak

31

32 The interdisciplinary meeting involved reporting the coordinated response to the *Cryptosporidium* outbreak
33 linked to a local swimming pool. The discussions highlighted the importance of vigilant water filtration and pool
34 treatment monitoring, as well as the necessity of interdisciplinary cooperation between environmental health,
35 health protection, and other local health agencies. Reviewing outbreak control plans regularly demonstrated
36 the importance of adhering to established communicable disease surveillance protocols to control an
37 outbreak. This meeting helped me appreciate the multi-agency expertise in protecting communities against

1 communicable disease outbreaks through a systematic and proactive response, underpinned by
2 epidemiological principles such as the Bradford Hill criteria.⁴

4 The new Wales-wide 20-mph speed limit law

6 My first-hand witness of the implementation of Wales' 20mph speed limit law passed in July 2022 highlights
7 the importance of synergy between researchers and policymakers. This pioneering legislation aims to make
8 streets safer and inspire other nations. Research by public health practitioners and Edinburgh Napier
9 University suggests it could reduce collisions by 40%, preventing 6-10 fatalities and 1,200-2,000 injuries
10 annually. This collaboration between research findings and policy decisions has led to a significant change
11 prioritizing community safety and wellbeing.

13 **Challenges in this placement**

- 15 1. One of the key challenges in this placement is managing primary clinical responsibilities and core
16 teaching requirements alongside the unique learning opportunities in LIFT. Proactive planning and
17 coordination are essential to leverage the benefits of the program.
- 19 2. The scope of work in public health is also significantly different from routine clinical practice, requiring
20 a period of transition to the complex network of health policies and political agendas involved. Hence,
21 dedicating focused effort to expand knowledge in the field is essential.

23 **Conclusions**

25 An exposure to a diverse range of public health issues along with ongoing projects in the field—including
26 family health, environmental concerns, and regulatory matters—, has deepened my appreciation for senior
27 professionals. These dedicated individuals work tirelessly behind the scenes to drive changes that improve
28 the health and welfare of the population.

30 With rising chronic diseases, integrating knowledge in public health into medical training is crucial. I strongly
31 encourage junior doctors to embrace public health training, as it offers new perspectives on complex health
32 issues through identifying practical guidelines, conducting quality improvement projects, and potentially helps
33 develop new skills through sharing learning experiences and teaching.

35 **Permissions and conflict of interest**

37 I worked as a foundation trainee in Ysbyty Gwynedd (Bangor Hospital) and declare no other competing
38 interests. Permission for publication has also been obtained from Dr. Ushan Andraday, Foundation Program
39 Director, Betsi Cadwaladr University Health Board NHS Wales.

Comentado [MOU1]: Reviewer C: -The conclusion well summarized the experience with stating the importance of implementing public health in medical training.

Comentado [MOU2R1]: Response: Thank you!

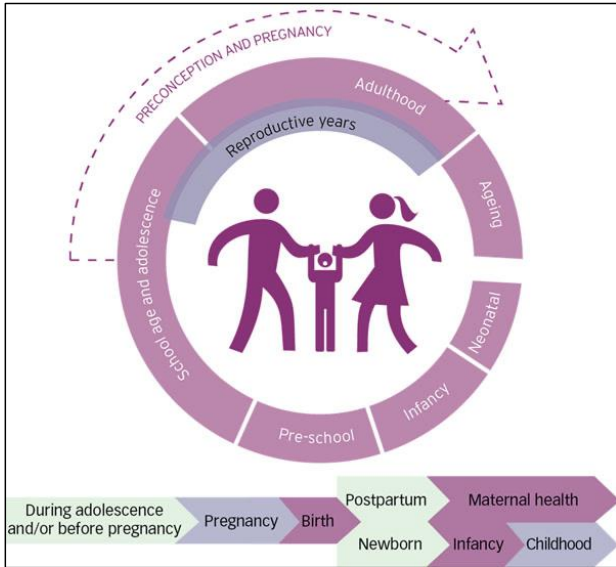
1 Figure 1 reprinted with permission from [Copyright holder, Elizabeth Mason].

Accepted, in-press

1 **REFERENCES.**

- 2
- 3 1. Mason E, Chandra-Mouli V, Baltag V, Christiansen C, Lassi ZS, Bhutta ZA. Preconception care:
4 advancing from 'important to do and can be done' to 'is being done and is making a difference'. *Reprod*
5 *Health*. 2014;11 Suppl 3(Suppl 3):S8.
- 6
- 7 2. The Lancet. *Preconception health*. <https://www.thelancet.com/series/preconception-health>. Last updated
8 April 17, 2018; cited June 19, 2024
- 9
- 10 3. Hart JT. The inverse care law. *Lancet*. 1971 Feb 27;1(7696):405-12.
- 11
- 12 4. Hill AB. The Environment and Disease: Association or Causation? *Proc R Soc Med*. 1965;58(5):295-300.

1 FIGURES AND TABLES.



2
3 Figure 1 Preconception Care