

Building New Leaders

Developing the Health Science
Workforce of Tomorrow





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The story of H2BB

The Ontario Bioscience Innovation Organization (OBIO) launched the Health to Business Bridge (H2BB™) program in 2017. OBIO describes the program and its goals as “preparing early career professionals to transition into industry and to be the new leaders in industry”. H2BB™ began as a collaboration between academic institutions and Ontario’s health science industry with the goal of giving industry easier and more successful access to business interns and giving students exposure to and experience in the health science and health technology sectors in the province. Over the past three years, the program has evolved beyond a focus on business to include essential knowledge areas like industry research and development (R&D), operations and regulatory and is now aimed at anyone transitioning into industry from any background and is no longer limited to academic participants (interns).

H2BB™ is characterized by specially designed workshops to augment academic learning and bring a health science industry perspective to general skills. These workshops are complemented by the engagement of Subject Matter Expert Advisors (“advisor”) to mentor each participant and coach them to be successful and deliver value to the company they are placed in.

To date, over 140 participants have taken part in the program. OBIO commissioned this evaluation to understand how H2BB™ has addressed the lack of industry-ready talent, which is a weakness limiting Ontario’s health science industry’s ability to commercialize and export technology.

A lack of industry-ready talent

Three key stakeholder groups – industry leaders, supervisors and program participants – gave qualitative and quantitative feedback in interviews and surveys, and the primary research was complemented by an analysis of former participants’ career paths and an environmental scan of other relevant training programs.

The objective of the evaluation is to understand how H2BB™ has addressed the lack of industry-ready talent that senior health science executives identified as a weakness limiting Ontario’s health science industry’s ability to commercialize and export technology, that was reported in OBIO’s 2017 report “Bridging the Talent Gap”¹.

OBIO commissioned this evaluation of H2BB™ during Summer 2020. The evaluation includes gathering novel primary research from different groups of stakeholders who have been involved in H2BB™ in 2017, 2018, 2019 and 2020.

The evaluation tests the hypothesis that H2BB™ has increased the quality of the talent pool in Ontario’s health science industry and also explores future directions for the program so that OBIO can build on its strengths. The evaluation is based on a series of questions that have been formulated using the themes identified through surveys and interviews with stakeholders involved in all years of H2BB™.

¹ Bridging the Talent Gap. Ontario Bioscience Innovation Organization; 2017.

The evaluation engaged three different stakeholder groups, each with a unique role in H2BB™:

1. Participants
 1. Those who took part before January 2020 are also known as interns
 2. Those who took part after January 2020 are also known as job seekers or participants
2. Supervisors, who are the line managers for participants within companies
3. Industry leaders, who hire participants for placements within their companies

Response Rates

Seven key informants – four industry leaders and three supervisors – were interviewed from late July to early August 2020. OBIO invited 115 current and past participants, 52 supervisors and 43 industry leaders to complete a survey about their experiences of H2BB™ between August 17th and September 1st, 2020. The survey was completed by 34 participants (response rate of 30%), 22 supervisors (response rate of 42%) and 18 industry leaders (response rate of 42%). The majority of the responding participants took part in H2BB™ in 2020 (71%). Industry leaders and supervisors who completed the survey had each taken part in at least one year of H2BB™. LinkedIn profiles were found for 99 of the 102 of the 2017-2019 H2BB™ participants and 95 of the profiles appeared to be complete and up to date.

Demographics of Respondents

Of the H2BB™ participants who completed the survey, 60% identify as female and 40% identify as male. This gender distribution contrasted with supervisors who completed the survey who are 41% female and 59% male; and industry leaders who completed the survey who are 17% female and 83% male. The gender distributions of the different stakeholder groups are similar to the findings in a recent report by McKinsey & Company showing that while women occupy 56% of entry-level roles in U.S. pharmaceutical and medical products companies, they fill only 25% of C-suite level roles².

The participants are more diverse in terms of race or ethnicity than supervisors or industry leaders with 41% of participants identifying as a member of a visible minority compared to 22% of supervisors and industry leaders, as shown in the table below, which is a significant difference although it should be noted that a fifth of participants and a third of supervisors and industry leaders did not answer the question about their race or ethnicity. According to the 2016 census, 29% of people in Ontario identify as a member of a visible minority meaning that the participants in H2BB™ are more diverse than the general population.

Participants were surveyed about their age and level of educational attainment. Thirty-two percent of participants are aged 23 to 25, 29% are aged 26 to 29; 24% are aged 29 to 34; 11% are aged 35 to 39; and 3% are aged 40 and over. Ninety-one percent of participants received their highest degree in Canada with 29% holding a Bachelor's, 50% holding a Master's, 18% holding a PhD and 3% holding an MD, LLB or PEng. In the 2019 evaluation, only 6% of interns held PhDs so the rate of 18% found in the 2020 survey is driven by the over-representation of 2020 H2BB™ participants.

Employers of Respondents

The industry leaders, supervisors and participants who responded to the survey are employed by companies with somewhat similar characteristics in terms of their type, headcount and development

² Gretchen Berlin G, Darino L, Groh R, Kumar P. Women in healthcare: Moving from the front lines to the top rung. McKinsey & Company; 2020.

stage. Industry leaders and supervisors were surveyed about their current employers while participants were asked about the company where they did their H2BB™ placement.

Companies focused on therapeutics or medical devices are or were the most frequent employers of all three groups of stakeholders and the majority of all three groups are or were employed by companies with headcounts of 50 or fewer employees. The industry leaders and supervisors are evenly split between companies that are at the R&D or precommercial stage and those that are selling or at the commercial stage whereas 70% of participants were working in an R&D or precommercial setting while they were in H2BB™. Almost half the participants included in the 2019 evaluation were hired by precommercial companies and one third by commercial stage companies. See Appendix 1.

The need for H2BB™ persists because the program continues to address an unmet need for the development of early-career talent that companies cannot resolve without support, as described by all interviewed key informants. The environmental scan indicates that the program is unique in Ontario and possibly Canada because it is the only health science industry-focused program that incorporates skills training, mentorship and instructor-led training. H2BB™ combines components that the majority of industry leaders and supervisors rate as valuable or very valuable to their companies. The findings show that the value of H2BB™ lies in granting participants access to both external subject matter experts (“advisors”) and staff at OBIO who draw on their deep industry experience when administering the program. 73% of industry leaders and 88% of supervisors rate the access to mentors and experienced OBIO staff as valuable or very valuable. The role of advisors in H2BB™ is evolving from the original focus on subject matter expertise because participants and employers are looking for a broader range of support. Over 70% of industry leaders, supervisors and participants rate coaching on useful solutions or suggestions to work-related business challenges by a mentor as important or very important.

H2BB™ is building capacity in the Ontario health science industry by increasing the pool of skilled talent. Over 90% of industry leaders and supervisors report that participants met or exceeded their expectations in terms of job performance and 83% of surveyed participants agree that their participation in H2BB™ has made them more valuable to employers. Over 65% of past participants secured employment in the health science industry and over 50% continue to be employed in the industry.

53% of participants held roles that included R&D, 47% held roles that included project management and 43% held roles that included product and/or process development, which is typical for entry-level positions in the Ontario health science industry. See Appendix 2.

H2BB™ modules cover the core business areas of Ontario health science companies: research and development (R&D), project management, product and/or process development and quality. The majority of interviewed key informants and survey respondents agree that the current mix of modules is appropriate and emphasize the need to cover the core technical areas that are fundamental to early-stage health science companies and that raise the calibre of talent in the industry ecosystem overall. In addition, interviewees indicate that new employees often continue to be lacking in the interpersonal competencies that are expected in the commercial sector. There is strong support for modules in several interpersonal competencies including verbal communication, written communication, and problem-solving and decision-making.

Over half of industry leaders and supervisors say they face difficulties frequently or very frequently when hiring people into business development roles, a core function for an early-stage company. Half of supervisors also report difficulties frequently or very frequently when recruiting for R&D and product and/or process development roles, which are also fundamental to new health science companies. Most industry leaders and supervisors report that they have hired or intend to hire

experienced professionals from another industry into their companies, which presents an opportunity to train new entrants into the sector through H2BB™.

OBIO offers companies that partner with them in H2BB™ access to the OBIO job board. Fifty-three percent of industry leaders rate ongoing access to talent via OBIO's job board as valuable or very valuable to their companies and 47% of industry leaders rate ongoing access to talent through OBIO's pre-screening of candidates as valuable or very valuable to their companies.

A possible solution to hiring challenges is recruiting experienced professionals from other industries that may be contracting or down-sizing, particularly in the current economic climate. See Appendix 3 and 4.

Looking to the future, there is considerable opportunity for OBIO to build on the success of H2BB™ to maximize talent development in the industry.

Recommendations

Government and industry should continue to partner with OBIO to deliver H2BB™ and support strategic expansion of the program in response to stakeholders' needs.

OBIO has multiple opportunities to evolve its talent-development offerings, either within H2BB™ or as complementary programs. Areas to explore include:

- Maintaining high-quality training in the core technical areas needed for early-stage health science companies i.e. R&D, project management, product and/or process development and quality.
- Setting expectations around the role of mentors in response to the needs of stakeholders, in particular the desire for coaching on useful solutions or suggestions to work-related business challenges.
- Exploring how to help professionals who are at an early stage in their careers develop interpersonal competencies, which are in high demand by employers but are challenging to impart through instructor-led training.
- Determining how to assist experienced professionals transitioning into the industry from other sectors.
- As companies mature, understanding emerging roles that may emerge in the industry and how to support the evolving needs of the ecosystem.

Appendix

Appendix 1

Characteristics of Companies Employing Survey Respondents*			
	Industry Leaders (n = 18)	Supervisors (n = 22)	Participants** (n = 34)
<i>Type</i>			
Therapeutic	22%	14%	37%
Medical device	33%	32%	33%
Diagnostics	0%	9%	3%
Digital health	17%	0%	3%
Nutritional health	0%	0%	3%
Direct to consumer	0%	0%	3%
Research tools	6%	13%	3%
Other	22%	32%	13%
<i>Headcount</i>			
Less than 5	6%	14%	20%
5-10	39%	23%	40%
11-50	33%	23%	17%
More than 50	22%	41%	23%
<i>Development stage</i>			
R&D or precommercial	44%	45%	70%
Licensing	0%	0%	3%
Commercial or selling	53%	55%	13%
Other	3%	0%	13%
*Percentages may not total 100 due to rounding			
** Respondents were asked about the company that employed them during their participation in H2BB™			

Appendix 2

Please select which category or categories your role fell under while participating in H2BB™	
Category	Participants
Research & Development	53%
Project Management	47%
Product and/or Process Development	43%
Business Development	33%
Quality	23%
Manufacturing	13%
Regulatory Affairs / Compliance	13%
Data Analytics	13%
Sales	13%
Marketing	13%
Clinical Research	10%
Information Systems	7%
Finance & Administration	3%
Health IT / Software Development	3%

Appendix 3

Respondents indicating that they face difficulties hiring qualified candidates for specific job functions frequently or very frequently		
	Industry Leaders	Supervisors
Research & Development	29%	50%
Clinical Research	23%	8%
Product and/or Process Development	31%	50%
Manufacturing	8%	23%
Quality	17%	43%
Regulatory Affairs/ Compliance	27%	38%
Medical Affairs	27%	17%
Government Relations	0%	8%
Patient & Caregiver Relations	18%	17%
Finance & Administration	17%	14%
Information Systems	36%	0%
Legal	10%	17%
Data Analytics	30%	17%
Health IT / Software Development	36%	8%
Business Development	54%	54%
Sales	31%	33%
Marketing	23%	31%
Project Management	25%	38%

Appendix 4

Have you hired experienced professionals from another industry into your company?*		
	Industry Leaders	Supervisors
Yes	67%	29%
No, but intend to do so	20%	36%
No, and no intention to do	13%	36%
*Percentages may not total 100 due to rounding		