



Profile of the IFATE Healthcare science pathway occupations in Cheshire and Warrington - May 2023

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South Cheshire Chamber as the lead employer representative body developing the Local Skills Improvement Plan (LSIP) have commissioned this work from Brennan Wilson Ltd. The work takes the qualification pathways that have been developed by the Institute for Apprenticeships and Technical Education, mapping different occupations against them and contextualises them for the Cheshire and Warrington economy.

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Introduction

The Healthcare science pathway is one of four pathways that sit within the Health and science technical education route. There are 15 routes that span the range of technical education in England which have been developed by the Institute for Apprenticeships and Technical Education ([IFATE](#)). This profile¹ draws on work commissioned by IFATE from the Institute of Employment Research (IER) at Warwick University. This IER project maps the 15 routes, and their linked occupational maps, to the Standard Occupational Classification (SOC) at the 4-digit level.

Further work has been undertaken to disaggregate the IER SOC mapping to the IFATE pathways that sit below each route, to provide a 4-digit SOC mapping for each pathway. The group of SOC codes generated for each pathway has been used, in this instance, to generate the profile of the Healthcare science pathway below. Data is from the Lightcast Analyst tool.

Profiles for other occupations can be found [here](#).

Occupational mapping

The table below sets out the (4-digit SOC) occupations that are supported in some way by the Healthcare science pathway, and the volume of employment in Cheshire and Warrington that is associated with each of these occupations.

Some occupational areas are supported by more than one standard (eg Biological scientists and biochemists is a single SOC area supported by two standards); some occupational areas in the table below will encompass jobs for which there are currently no standards or will be no standards (eg various types of Natural and social science professionals n.e.c.), and some of the roles within the occupational areas identified will fall out of scope of the Pathway (eg a large number of roles classified as being Nurses, or being Cleaners and domestics, will not sit within the Healthcare science pathway).

This means that the 2023 employment numbers given in the jobs column below is the maximum possible ceiling of jobs in Cheshire and Warrington that will relate to currently developed IFATE standards in the Health pathway.

On this basis, there are a maximum of c36k jobs in Cheshire and Warrington to which standards in the Healthcare science pathway relate. The occupations with more than 1,000 employed in 2023 in Cheshire and Warrington are:

- Managers and proprietors in other services n.e.c.
- Biological scientists and biochemists
- Nurses
- Quality assurance and regulatory professionals
- Laboratory technicians
- Business and related associate professionals n.e.c.
- Pharmacy and other dispensing assistants
- Cleaners and domestics

¹ Commissioned through Cheshire and Warrington LEP to support the LSIP process.

It should be noted that Nurses account for c11k jobs in Cheshire and Warrington, as do Cleaners and domestics; but only a very small number of these jobs will, in practice, relate to the Healthcare science pathway. **For this reason, these two occupational areas have been removed from the analysis which follows in the remainder of this document as it is believed that inclusion of either or both would distort the analysis – particularly with regard to the type of skills sought by employers.**

Jobs in Cheshire and Warrington in 2023 supported by standards in the Healthcare science pathway			
SOC 2010 code	SOC2010 description	Jobs	Standard name
1259	Managers and proprietors in other services n.e.c.	2762	Hygiene Specialist
2112	Biological scientists and biochemists	1876	Clinical Trials Specialist
			Clinical pharmacology scientist (integrated degree)
2119	Natural and social science professionals n.e.c.	287	Health and Care Intelligence Specialist
2219	Health professionals n.e.c.	757	Healthcare Science Practitioner
			Prosthetist and Orthotist (Integrated Degree)
2231	Nurses	10656	Operating Department Practitioner
2462	Quality assurance and regulatory professionals	1572	Regulatory Affairs Specialist
3111	Laboratory technicians	1652	Healthcare science assistant
			Healthcare science associate
3216	Dispensing opticians	144	Dispensing Optician
3217	Pharmaceutical technicians	510	Pharmacy Technician
3218	Medical and dental technicians	534	Clinical dental technician
			Dental Laboratory Assistant
			Dental Technician (Integrated)
			Prosthetic and Orthotic Technician
3539	Business and related associate professionals n.e.c.	2884	Clinical Coder
7114	Pharmacy and other dispensing assistants	1393	Optical Assistant
			Pharmacy services assistant
9233	Cleaners and domestics	10684	Healthcare Cleaning Operative

Source: Brennan Wilson Ltd analysis of IER and Lightcast data

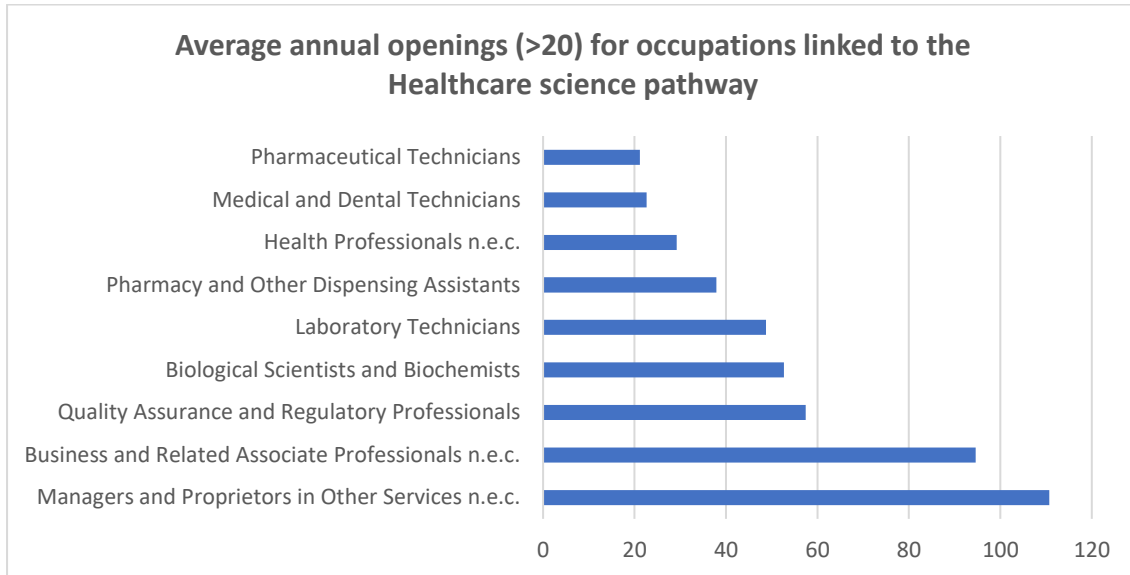
Occupational demand

In total, there are slightly fewer than 500 openings in these occupations each year, with the highest levels of demand each year being for:

- Managers and Proprietors in Other Services n.e.c.
- Business and Related Associate Professionals n.e.c.
- Quality Assurance and Regulatory Professionals

- Biological Scientists and Biochemists
- Laboratory Technicians

The occupations where average annual openings are >20 in Cheshire and Warrington are shown below.



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

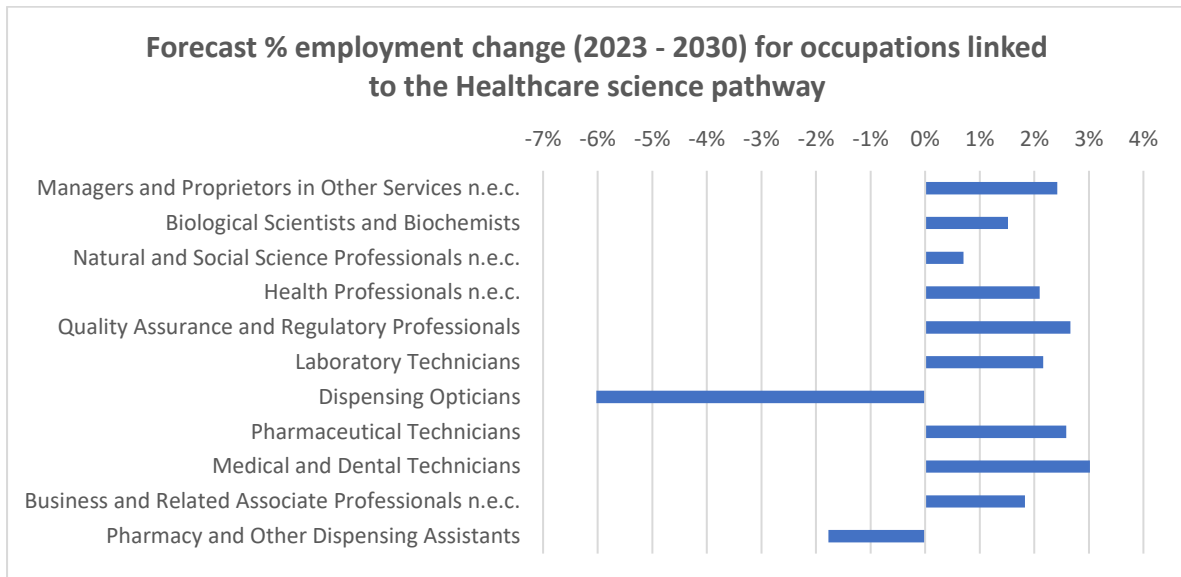
Analysis of Location Quotients (LQs) for occupations linked to the Healthcare science pathway indicate that employment volumes in Cheshire and Warrington in these occupations are generally what national averages would suggest they should be, although Biological Scientists and Biochemists, and Laboratory Technicians are over-represented in the Cheshire and Warrington labour market (LQs of 1.22 and 1.40 respectively) and Natural and Social Science Professionals n.e.c., and Health Professionals n.e.c. are under-represented (LQs of 0.41 and 0.80 respectively).

LQ of occupations in Cheshire and Warrington linked to the Healthcare science pathway		
	2023 Jobs	2023 Location Quotient
Managers and Proprietors in Other Services n.e.c.	2762	0.98
Biological Scientists and Biochemists	1876	1.22
Natural and Social Science Professionals n.e.c.	287	0.41
Health Professionals n.e.c.	757	0.80
Quality Assurance and Regulatory Professionals	1572	0.99
Laboratory Technicians	1652	1.40
Dispensing Opticians	144	0.97
Pharmaceutical Technicians	510	1.16
Medical and Dental Technicians	534	0.97
Business and Related Associate Professionals n.e.c.	2884	1.00
Pharmacy and Other Dispensing Assistants	1393	1.09

Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Employment in Cheshire and Warrington in occupations linked to the Healthcare science pathway is forecast to grow by 2% overall in 2030 compared to 2023 levels. Most occupational areas are

forecast to grow aside from Dispensing opticians (-6%) and Pharmacy and other dispensing assistants (-2%).



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Wages

Four of the occupations linked to the Healthcare science pathway pay median wages in excess of the median wages for all occupations in Cheshire and Warrington, which is £25.8k. Those occupations are :

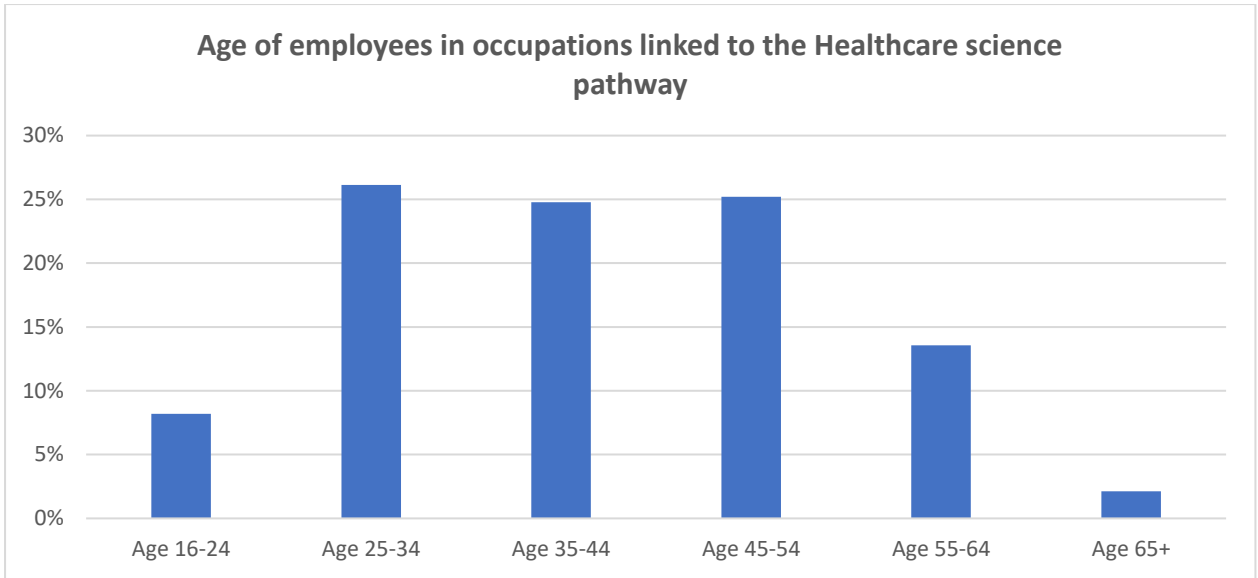
- Biological Scientists and Biochemists
- Natural and Social Science Professionals n.e.c.
- Health Professionals n.e.c.
- Quality Assurance and Regulatory Professionals

2023 Median wages in Cheshire and Warrington for occupations linked to the Healthcare science pathway

	Median Wages
Managers and Proprietors in Other Services n.e.c.	£20,686
Biological Scientists and Biochemists	£38,094
Natural and Social Science Professionals n.e.c.	£30,797
Health Professionals n.e.c.	£26,907
Quality Assurance and Regulatory Professionals	£35,144
Laboratory Technicians	£21,462
Dispensing Opticians	£25,162
Pharmaceutical Technicians	£16,803
Medical and Dental Technicians	£22,183
Business and Related Associate Professionals n.e.c.	£25,561
Pharmacy and Other Dispensing Assistants	£15,877
<i>Source: Brennan Wilson Ltd analysis of IER and Lightcast data</i>	

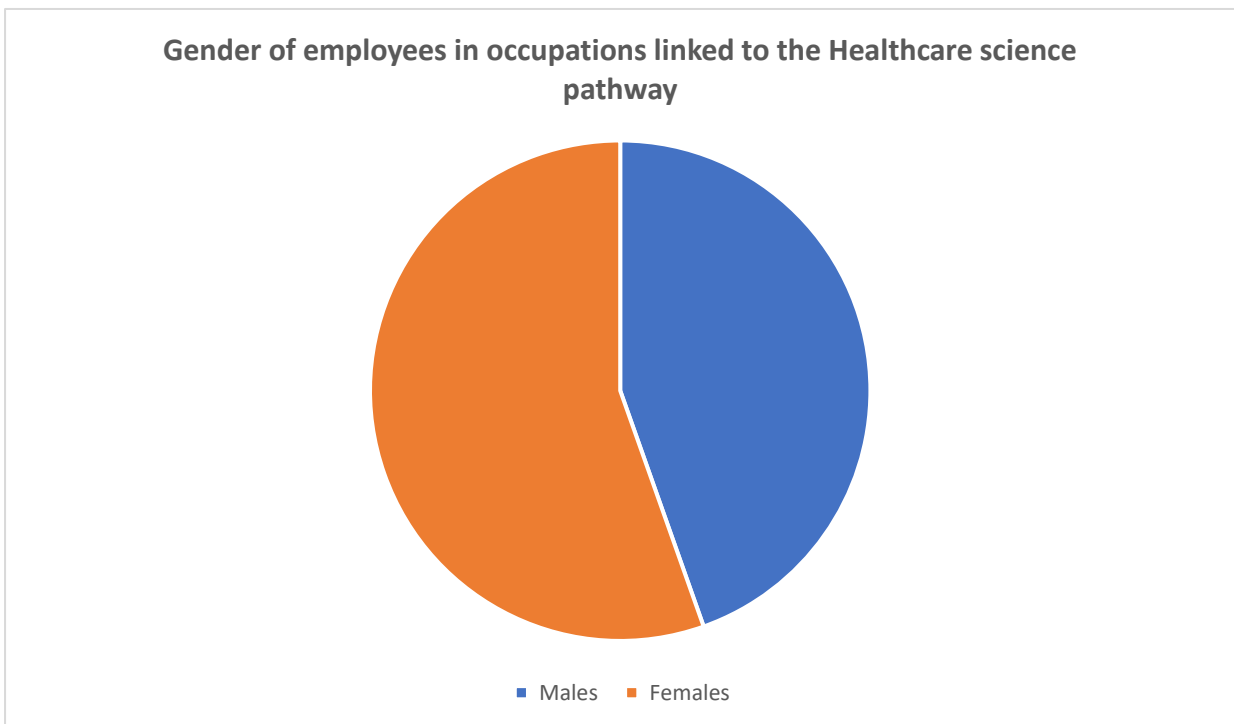
Age and gender

Nationally, about a third (34%) of those employed in occupations linked to the Healthcare science pathway are aged 34 or below, 16% are aged 55 or above.



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Employment is slightly skewed to females. Nationally, 55% of all employment in occupations linked to the Healthcare science pathway is by females.



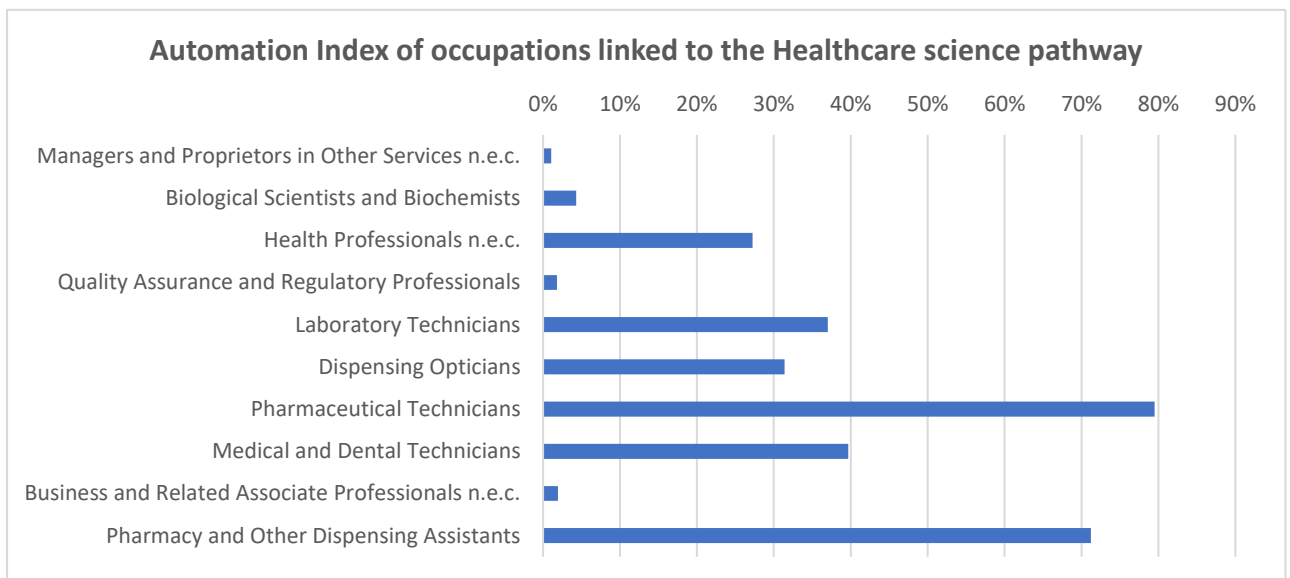
Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Automation Risk

The Lightcast UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. Estimates of how much time is spent performing those tasks are constructed using the frequencies for different Work Activities in the US ONET database, and mapped across to UK SOC. The relationship between different 38 task categories and Frey and Osborne’s estimates of the “probability of computerisation” is used to classify each task category as high, middle, or low risk, depending on the significance and direction of that relationship.

The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The Automation Index scores for occupations linked to the Healthcare science pathway are set out in the chart below. Most occupations, have an automation index score below 50%. The exception to this is for Pharmaceutical technicians, and Pharmacy and other dispensing assistants, where both occupations have an automation index above 70%.



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Industry sectors

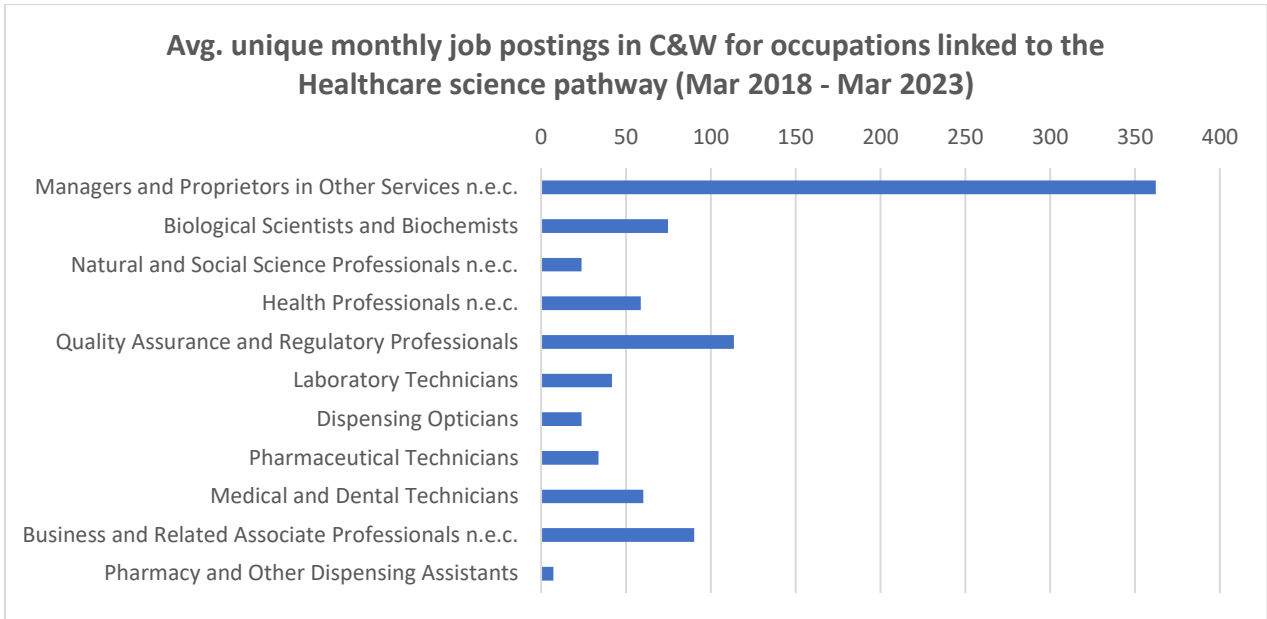
Occupations associated with the healthcare science pathway are distributed quite widely across industry sectors in Cheshire and Warrington. A fifth of these jobs can be found in the human health and social work activities sector. Almost as many can be found in the Professional, scientific and technical activities sector.

Distribution of occupations in C&W linked to the Healthcare science pathway across industry sectors			
	Linked occupations in sector (2021)	% of linked occupations in sector (2021)	% of Total Jobs in sector (2021)
Human Health and Social Work Activities	2788	20%	5%
Professional, Scientific and Technical Activities	2717	19%	5%
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	1964	14%	3%
Manufacturing	1530	11%	4%
Administrative and Support Service Activities	1291	9%	3%
Financial and Insurance Activities	925	7%	3%
Education	578	4%	2%
Construction	498	4%	2%
Public Administration and Defence; Compulsory Social Security	459	3%	3%
Arts, Entertainment and Recreation	336	2%	3%
Transportation and Storage	291	2%	1%
Information and Communication	268	2%	2%
Water Supply; Sewerage, Waste Management and Remediation Activities	143	1%	4%
Real Estate Activities	103	1%	1%
Agriculture, Forestry and Fishing	84	1%	2%
Other Service Activities	79	1%	1%
Accommodation and Food Service Activities	63	0%	0%
Mining and Quarrying	30	0%	8%
Electricity, Gas, Steam and Air Conditioning Supply	26	0%	2%
Source: Brennan Wilson Ltd analysis of IER and Lightcast data			

Job postings

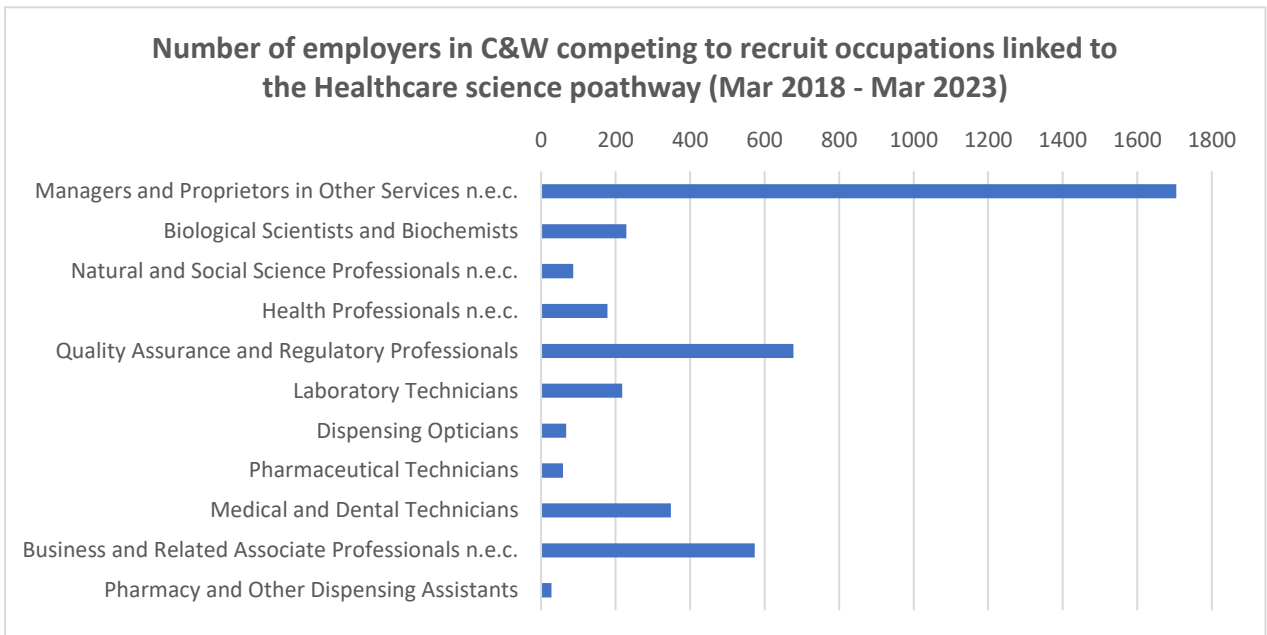
There were two occupations linked to the Healthcare science pathway that averaged more than 100 unique job postings per month in Cheshire and Warrington in the five years to March 2023. These were:

- Managers and Proprietors in Other Services n.e.c.
- Quality Assurance and Regulatory Professionals



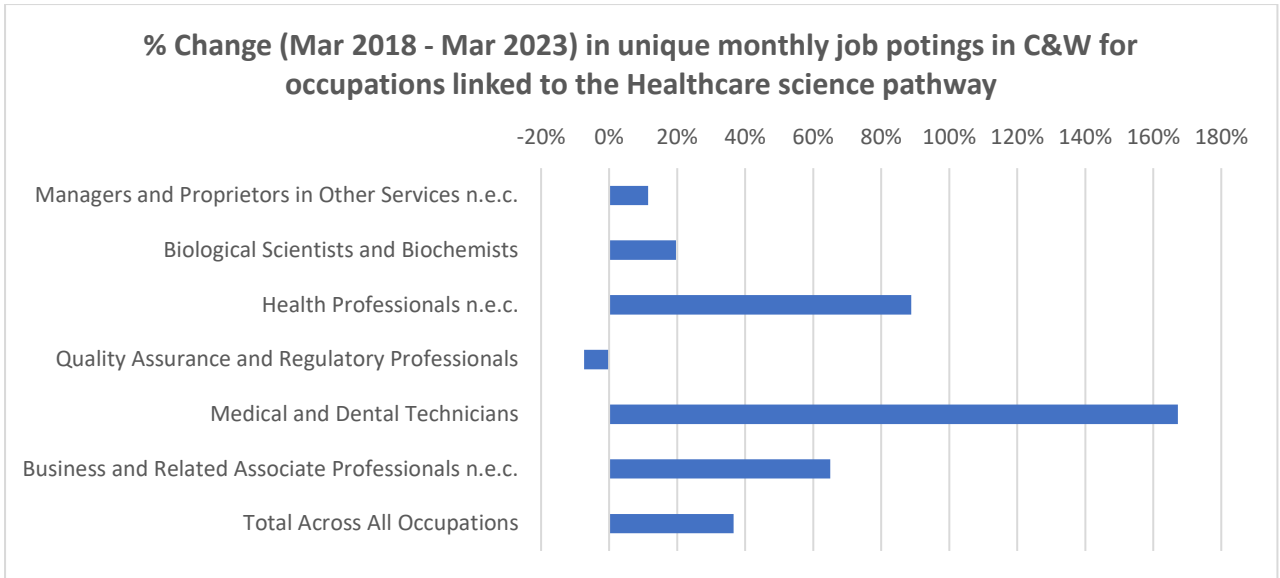
Source: Brennan Wilson Ltd analysis of IER and Lightcast data

The number of employers in Cheshire and Warrington competing to appoint to these occupations over this time ranged from 1705 for Managers and proprietors of other services n.e.c. to 28 for Pharmacy and other dispensing assistants.



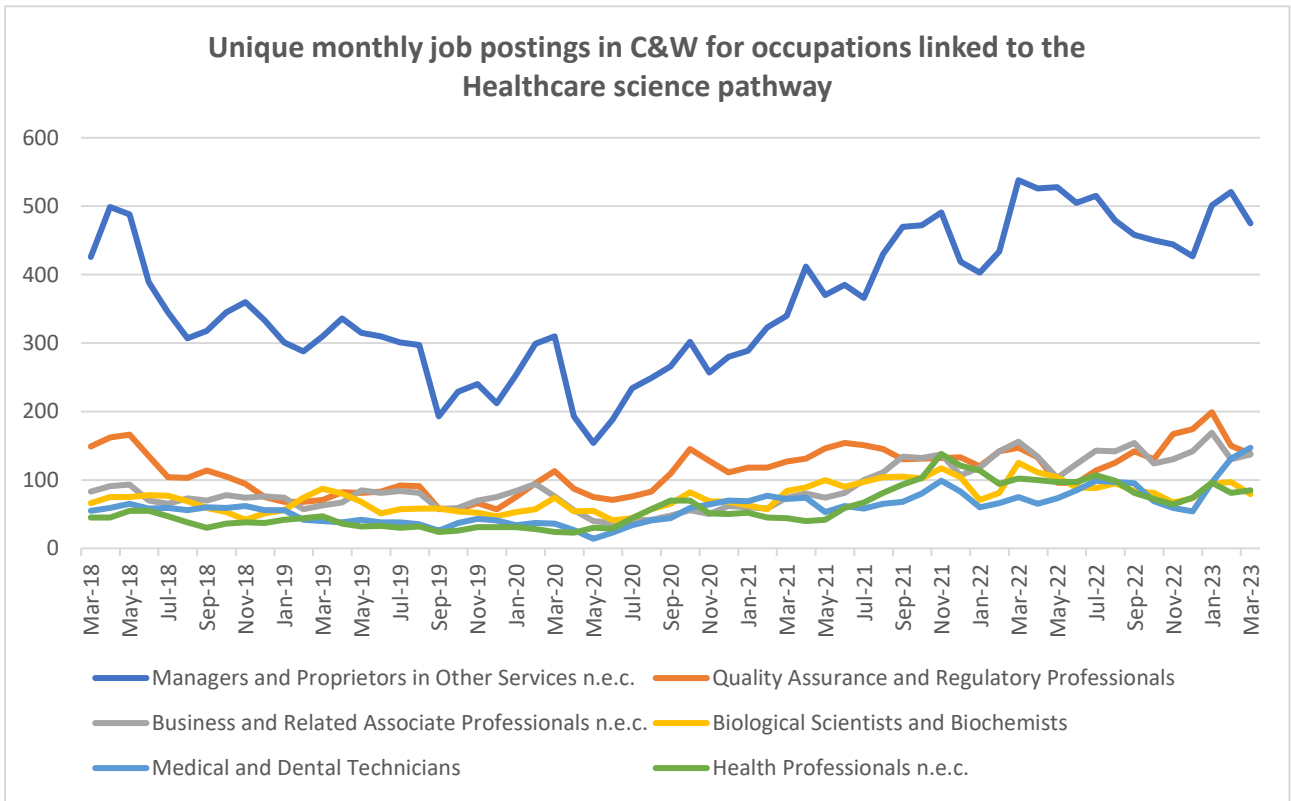
Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Overall there was an increase of 37% in the unique monthly postings for occupations linked to the Healthcare science pathway over the last 5 years. Most occupations linked to the pathway experienced an increase in postings with only Quality assurance and regulatory professionals and Pharmacy and other dispensing assistants experiencing a decline in this time.



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

The trend chart below shows a steady increase in demand for key occupations linked to the Healthcare science pathway following the onset of pandemic. Demand continued to increase after the cessation of lockdowns.



Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Specialised skills

The table below shows the top specialised skills sought by employers in job postings for occupations linked to the Healthcare science pathway. The five most sought after specialised skills were:

- Auditing
- Operations Management
- Key Performance Indicators (KPIs)
- Project Management
- Pharmaceuticals

The following skills have the highest location quotients:

- Pharmaceuticals
- Good Manufacturing Practices
- Chemistry

Top specialised skills sought in job postings in C&W for occupations linked to the Healthcare science pathway			
	Unique Postings	National Average	LQ
Auditing	1804	1992	0.91
Operations Management	1629	1817	0.90
Key Performance Indicators (KPIs)	1566	1337	1.17
Project Management	1408	1701	0.83
Pharmaceuticals	1217	858	1.42
Finance	913	1359	0.67
Marketing	873	1147	0.76
Good Manufacturing Practices	806	435	1.85
Quality Management	765	760	1.01
Risk Analysis	761	779	0.98
Data Analysis	694	713	0.97
Agile Methodology	664	907	0.73
Supply Chain	658	505	1.30
Quality Management Systems	647	558	1.16
Chemistry	644	380	1.70
Risk Management	626	758	0.83
Biology	623	511	1.22
Stakeholder Management	598	703	0.85
Change Management	541	544	0.99
Business Development	524	679	0.77
Source: Brennan Wilson Ltd analysis of IER and Lightcast data			

Common skills

The table below shows the top common skills sought by employers in job postings for occupations linked to the Healthcare science pathway. The three most sought after common skills were:

- Management
- Communications

- Customer Service

Top common skills sought in job postings in C&W for occupations linked to the Healthcare science pathway			
	Unique Postings	National Average	LQ
Management	6567	7485	0.88
Communications	6290	6683	0.94
Customer Service	3793	3439	1.10
Operations	2983	3338	0.89
Leadership	2976	3170	0.94
Planning	2611	2798	0.93
Sales	2069	2261	0.92
Detail Oriented	1980	1997	0.99
Problem Solving	1617	1650	0.98
Self-Motivation	1405	1397	1.01
Influencing Skills	1351	1339	1.01
Organizational Skills	1233	1296	0.95
Interpersonal Communications	1158	1202	0.96
Innovation	1109	1211	0.92
Research	1096	1915	0.57
Coaching	1066	903	1.18
Microsoft Excel	1008	1054	0.96
Governance	846	1110	0.76
Time Management	829	824	1.01
Quality Assurance	808	877	0.92

Source: Brennan Wilson Ltd analysis of IER and Lightcast data

Software skills

The table below shows the top software skills sought by employers in job postings for occupations linked to the Healthcare science pathway. The three most sought after software skills were:

- Microsoft Excel
- Microsoft Office
- Microsoft PowerPoint

Top software skills sought in job postings for occupations linked to the Healthcare science pathway		
	C&W Postings	National Average
Microsoft Excel	1,008	1,054
Microsoft Office	784	854
Microsoft PowerPoint	524	607
Microsoft Outlook	463	446
SAP Applications	260	218
Microsoft Word	184	229
Spreadsheets	164	151
Microsoft Project	132	168
Information Technology Infrastructure Library	126	115
Application Programming Interface (API)	125	127
Microsoft SharePoint	116	137
SQL (Programming Language)	105	177
Source: Brennan Wilson Ltd analysis of IER and Lightcast data		

Spatial demand

The table below sets out the volume of job postings in Cheshire and Warrington between March 2018 and March 2023, by place, for occupations linked to the Healthcare science pathway. Warrington, Chester, Macclesfield and Crewe all saw in excess of 2,000 unique postings for these types of occupation.

Places with the highest volume of job postings for occupations linked to the Healthcare science pathway, 2018-2023

	Total Postings	Unique Postings	Median Posting Duration
Warrington	12619	5858	29 days
Chester, Cheshire West and Chester	13781	4729	31 days
Macclesfield, Cheshire East	6582	2392	31 days
Crewe, Cheshire East	5996	2262	29 days
Ellesmere Port, Cheshire West and Chester	1972	923	32 days
Northwich, Cheshire West and Chester	1629	728	30 days
Wilmslow, Cheshire East	1351	705	32 days
Knutsford, Cheshire East	1708	698	30 days
Winsford, Cheshire West and Chester	713	314	31 days
Nantwich, Cheshire East	604	297	25 days
Alderley Edge, Cheshire East	563	250	28 days
Congleton, Cheshire East	419	201	34 days
Middlewich, Cheshire East	357	174	32 days
Sandbach, Cheshire East	228	139	29 days
Frodsham, Cheshire West and Chester	155	74	32 days
Poynton, Cheshire East	105	70	31 days
Neston, Cheshire West and Chester	98	66	34 days
Tarporley, Cheshire West and Chester	144	65	23 days
Lymm, Warrington	99	54	31 days
Great Sankey, Warrington	36	22	33 days
Malpas, Cheshire West and Chester	31	22	27 days
Disley, Cheshire East	30	10	22 days
Latchford, Warrington	7	1	n/a

Source: Brennan Wilson Ltd analysis of IER and Lightcast data