## Work based Placement Course Aims and Learning Outcomes

### Aims

The aims of this course are to:

* Enhance student experience
* Provide students with an authentic learning opportunity
* Enhance student employability
* Enable students to acquire professional knowledge and understanding of the daily work, strategic priorities, objectives and functions of a health and/or development sector organisation
* Facilitate student application of academic, technical/programming and reproducible science skills in a work environment
* Provide students with opportunities to strategically develop a range of transferable skills, as well as our [Graduate Attributes](https://www.abdn.ac.uk/graduateattributes/)

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### Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Develop work placement roles and responsibilities; and negotiate these with all stakeholders.
2. Undertake a risk assessment and prepare a formal agreement with the placement host;
3. Design an efficient project workflow;
4. Demonstrate evidence of the application of academic and technical skills in the workplace, including collection of relevant data, synthesis, analysis and interpretation;
5. Critically evaluate and describe the work of a health data scientist as it is situated within the broader context of everyday life;
6. Demonstrate evidence of the use of open and reproducible science guidelines in technical analysis, through the operation of collaborative science platforms; and
7. Clearly communicate data science outputs to relevant stakeholders.

## WBP DHS Project Activities, Aims and Learning Outcomes

### Placement Activities

* Extract/Collect Data: This involves identifying, downloading and organizing large-scale, multi-country DHS datasets in Stata and SPSS formats for different survey years and recode types in a systematic way.
* Prepare and Manage Data: This involves properly labelling the datasets and folders to ensure they are well harmonized across countries and years, easy to access and ready for analysis.
* Variable Mapping: This includes identifying variables for the analysis and mapping them by year and survey
* Analyze Data: This involves applying satatistical techniques (Univariate and Bivariate analyses) to investigate health inequalities using SPSS and R in a transparent and reproducible manner.
* Interprete and Communicate results: This involves using visual tools such as maps and charts to interprete and communicate results effectively to stakeholders.

### Project Title:

Exploring Gender Inequalities in Low and Middle-Income Countries: DHS Data Compilation and Analysis of FGM, intimate partner violence, and autonomy in healthcare decision making.

### Aims:

1. To map and compare the prevalence of key gender inequality indicators (FGM, IPV, autonomy) across countries and survey years using DHS data.
2. To analyze how these gender inequalities differ by demographic and socioeconomic factors (rural/urban, age, education, wealth).
3. To visualize global and regional patterns in gender inequalities and identify priority areas for intervention.

### Objectives:

* Identify and extract relevant variables on FGM, IPV, and women’s autonomy from DHS datasets for all available countries and years.
* Conduct univariate analyses to describe the prevalence of each gender inequality indicator by country and year.
* Perform bivariate analyses to examine disparities in these indicators by rural/urban status, age, education, and standard of living.
* Interpret findings to inform future research and policy, focusing on the social and structural determinants of gender inequalities in health.
* Map and visualize the distribution of gender inequalities using geographic and demographic visual tools to highlight global and regional differences.
* (If time allows) Extend the analysis to map inequalities in cancer screening by gender and other sociodemographic factors.

### Placement Learning Outcomes

Upon completion of this project, I would have demonstrated the ability to

1. Systematically collect and organize secondary health data in a secure and ethical manner.
2. Confidently navigate the complexities of real-world data set, including understanding metadata, identifying and mapping relevant variables, and harmonizing data across different countries and survey rounds.
3. Perform rigorous statistical analysis (univariate and bivariate)
4. Apply open and reproducible science guidelines for health data analysis, using version control (eg. Github) to ensure transparency and reproducibility.
5. Visualize and communicate analytical outputs effectively through maps, charts, and reports tailored to both technical and non-technical audiences.
6. Apply critical thinking to interpret findings in the right context, linking data insights to broader public health questions and policy implications
7. Collaborate efficiently in a team environment, sharing code, coordinating tasks, and peer-reviewing work to maintain high-quality outputs.