PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Undergraduate exposure to patient presentations on the acute medical placement: a prospective study in a London teaching hospital
AUTHORS	Fung, Chee Yeen; Tan, Zhin Ming; Savage, Adam; Rahim, Mahdi; Osman, Fatima; Adnan, Mohammed; Peleva, Emilia; Sam, Amir

VERSION 1 – REVIEW

REVIEWER	Dr Tahir Nazir 1. Consultant Physician in Acute Medicine Lancashire Teaching Hospitals NHS Foundation Trust Royal Preston Hospital, Preston PR2 9HT 2. Division of Cardiovascular Sciences University of Manchester Oxford Road, Manchester M139PL
REVIEW RETURNED	01-Jul-2020

GENERAL COMMENTS	Authors have attempted to answer a very interesting question regarding clinical presentations on the acute medical take with their relevance to undergraduate medical teaching. They have used plain and easy to understand language that conveys the message to the reader effectively. However, I would like to recommend a few minor points that I believe can enhance the robustness of the study and the quality of this manuscript. 1. Some of the presentations rarely occur in isolation, For example, authors have plotted dyspnoea, cough, wheeze and hypoxia, all separately. It is not uncommon for patients with a cough to have some shortness of breath and similarly, those with wheeze often have a cough, too. It would be extremely rare to find hypoxia in the absence of a feeling of breathlessness. In view of this, I wonder whether authors would like to groups some of these symptoms together or clarify for the reader if the symptom occurred in isolation. Whilst according to the data. dyspnoea equally presents both in-hours and OOH; 'hypoxia' only appeared to present OOH ! Is it merely because we are doing more blood gas analyses OOH? I think we would need to remove some of the confounding factors. 2. It would be useful to see a graph of the demographic data and also the source of admission (GP Vs A&E) 3. If available, the data regarding EWS (early warning score) on the presentation can really strengthen the argument whether medical

	schools need to formalize some OOH experience for medical students. Especially, if this shows patients admitted OOH are often the sickest ones. 4. The duration of the study is rather short and its timing in summer probably does not represent the true face of medical take in the UK. 5. In the limitation, authors must consider that the current medical force structure covering the OOH medical shifts is already thinly stretched, and if in addition to delivering demanding clinical work, they are expected to provide some on-the-floor training for undergrad students, how would they manage? A reference to 'task based learning' may be useful in that context. 6. It may worth considering RCP acute care toolkit 5 - teaching on the acute medical units to explore some possible solutions.

REVIEWER	Jan Breckwoldt University Hospital Zurich
REVIEW RETURNED	26-Jul-2020

GENERAL COMMENTS	Dear Dr. Sam, dear co-authors, thank you for giving the opportunity to review your manuscript submitted to BMJ Open. In this paper you present the number of clinical presentations in an EM department over a 14-day period with a special focus on out-of-hours presentations. You report interesting data to inform curriculum designers on opportunities to encounter certain emergencies. I read the submission with interest, however, I think the present manuscript could be substantially improved by elaborating on its curricular and clinical context. In respect to the curricular aspect, it should be made clear the aim and the weight of the EM placement in question (i.e., what are the (overarching) learning goals, tasks to be performed, relative importance within the curricular blue print; at what time of training is this placement localized (year of training, what sessions does the placement build on (previous clinical courses, e-learning, lectures), where does it lead to). Clarifying these points would help to better understand the relevance of your findings. Related to the clinical context, the reader would like to have a view whether it's feasible to achieve sufficient numbers of emergency encounters for a given student. Since the number of cases is limited, this circumstance may in turn limit the number of students to be included into a programme. Clearly, the frequency of cases (exposure) is an important issue in EM, which is very evident for e.g. resuscitations (which do not occur often in the real clinical world). If a programme was unable to achieve adequate exposure, additional learning strategies should be pursued (e-learning, simulation). Perhaps you could provide numbers how often a student would be able to encounter a specific emergency, provided he or she went through a one-week placement. Specific points (in the order of the text) The title: appears a bit misleading as 'learning opportunities' are not limited to the pure number of presentations. Also important are: involvement of students, educational suitability (as a basis for discussion/debriefing, etc.). Rather ?: 'Number of emergency presentations medical students may encounter during acute medical

	placements'. Background: first sentence, line 57: I'd like to challenge this statement (or its wording). If true learning hours were counted, the majority of learning is related to theoretical content. Maybe, you re-word the sentence towards importance in clinical education ('clinical placements are essential …'). The second sentence appears vague, and in the next sentences I'm unable to follow the argument of (real) emergencies not being seen in hospitals. Perhaps, this a national development – this would limit your study rationale to the UK context. However, I think your work has a more generalizable scope: As discussed above, the main curricular question is HOW we can achieve to expose undergraduates to an adequate number of emergencies. As you showed, the number of cases IS limited, and strategies to meet these limitations are necessary. I think this would be a justifiable conclusion of your findings (in face of the limitation you acknowledged). Methods: as stated above, more information on the context needs to be provided. In respect to electronic patient records, did anyone objectify the clinical symptoms (with the question behind: it remains unclear whether these cases possessed educational value.). Analysis: did you present this comparison? – I did not find a respective section, neither in the results, nor in the discussion section. Ethics: I did not a statement within the manuscript. Discussion: - see 'analysis': this point appears interesting and could be taken up. - p.4, l 44/45: this remains speculation. However, it is of vital importance to treat these patients as soon as possible and direct transfer to endovascular interventional facilities is the gold standard. Shouldn't we acknowledge that for acute stroke and AMI the ED might not be the appropriate learning environment anymore? The discussion could elaborate a bit more on the implications drawn from your findings. The reference list appears a bit 'thin'. Maybe, you could integrate some literature on topics related to an expanded Discussion section. In summary, I think the data are worth reporting, but need a bit more context. Looking forward to a revision.

REVIEWER	Dr Elizabeth Grove University of Bristol, Center academic primary care UK
REVIEW RETURNED	28-Jul-2020

GENERAL COMMENTS	I was pleased to see an education article, especially as it is currently topical by looking at the delivery of medical education in the acute care setting. This paper has potential but there are a number of omissions particularly in the methodology and discussion, and limited results which restrict its utility. I have given further detail in my comment below. Abstract P 3, line 8-10 The objective states 'To identify the availability and variability of learning opportunities on an acute medical…' I think you need to add in 'through patient presentations' which you have included in the aims in the main text (page 4, line 30). This is important as the study only answers the question of availability and variability of clinical presentations and does not establish the full

	learning opportunities of an acute medical setting. P3, line 33-34 'Chest pain and hemiparesis were the ninth and 52nd most commonly seen, respectively.' I'm not sure how clear this statement is for the abstract. Perhaps it would be better to state that Important curriculum conditions such as hemiparesis was not a common presentation. You can expand in the results/ discussion. Methodology P 4, line 36-45 I feel that the methodology needs expanding. It is not clear who collected the data? How did you ensure that the data that was collected was accurate, did you double code any data collection? Was the data all collected from electronic records or where physical notes and observation charts reviewed? Were all the admission notes reviewed during the 14 day period or were any unavailable/ incomplete? P 4, line 47 I can see you have stated no patient involvement, but I can't see a comment about ethics, was this study approved by your university ethics committee? I appreciate that patients were not involved but it would be common practice to have a statement about ethics. Considerations include how the data collection was anonymised and how this electronic data is being stored. Results P5, line 16-17. You state – 'The 359 admissions represented 91 unique presentations, of which 63.7% were more commonly seen in out-of-hours (Figure 1).' When I look at figure 1 this shows 27 presentations not 91, it would help to elaborate what figure 1 is representing. You do not make any reference to the 36.3% of presentations that are seen more commonly in hours? Figure 1 – The X-axis appears to be describing number of cases per hour during in hours vs out of hours, this isn't an obvious graphical representation. It may helpful In the explain in the title or results how this is represented. P5, line 29 – 30. You state that 'Notably, presentations such as chest pain and hemiparesis were the ninth and 52nd most common….'. I'm not quite sure why this is 'notably', I presume you mean because these are important conditions in the medical curriculum and you had presumed they would have presented more. It may be better to avoid 'notably'. I don't find this particularly notable as in my experience most hemiparesis cases would go directly via ED/ stroke services rather than the acute medical unit. It may be better to state the result and it may add more weight to state what this represents as number of cases rather than just 52nd most common presentation, for example hemiparesis (2 cases) was the 52nd most common presentation. You mention in your data collection that you looked at the time of the admission, but in the results you only comment on case presentation numbers in terms of in hours vs out of hours, did the data show any particularly busy periods? This may be of relevance when thinking of medical placements. Discussion I think the discussion needs further work and referencing to ensure that the discussion and conclusion are justified by the results.

	P5, line 39-41. I wonder if it is important in your discussion to mention the proportion of hours in out of hours vs in hours. You state more conditions are seen out of hours, but you don't make a reference to the fact that in hours only accounts for 40hours / week whilst out of hours is 128 hours. This is again repeated in line 44-45 where you state 'Fewer clinical presentations may have been admitted to the hospital in-hours due to expanded primary care and community services.' Whilst this might be a contributor I think there may be other factors to explore and reference, not least that in hours only represents 40 hours / week or referrals from primary care await transport to get there. P5, line 40. What do you mean by 'important' presentations? I'm presuming you mean those that are key on the clinical curriculum P5, line 46-47. You state that Chest pain and hemiparesis presented 'less than expected', it maybe worth clarifying than who expected? Perhaps re-phrase that theses didn't seem to occur very much compared to other presentations. As mentioned before this doesn't surprise me. P5, line 52-52 – Have you got a reference to support your statement 'With most undergraduate acute medical clinical placements scheduled in-hours at teaching hospitals'. Our medical students are on a 24 hour rota in acute medical ward. P5, line 53 – I'm not sure your results fully support this statement 'students may be exposed to fewer, less variable and less acute presentations.' As you state that all conditions bar hypoxia were seen in hours and in hours accounts for a lot less tie than out of hours so a student may see the same variety and amount in an 8 hours period in hours or out of hours. It may be true that out of hours offers additional and potentially under used educational resources. P5, line 58 – 60 - 'Our findings suggest that students may require additional exposure to particular presentations….' This suggests that medical students learn in just the acute medical unit, surely students already have placements in specialist settings and other wards. I wonder if it is more accurate say that certain conditions are better seen and learnt about from the acute medical unit than other conditions. That certain conditions such as stroke may not be seen during an acute medical attachment and suggest that the curriculum should include exposure to these conditions elsewhere. The discussion suggests that out of hours might provide additional opportunities for students but I can't see a balanced discussion about difficulties to out of hours placements such as teaching capacity, the quality of learning from the presentations or missing out on in hours teaching. References This article would improve with more expansive references, particularly to expand the discussion. I would suggest some further reading and try to include some bigger and more recent observational studies on the subject. Some references, but not exclusive that may be relevant include - Sophie Park, Nada F. Khan, Mandy Hampshire, Richard Knox, Alice Malpass, James Thomas, Betsy Anagnostelis, Mark Newman,

	Peter Bower, Joe Rosenthal, Elizabeth Murray, Steve Iliffe, Carl Heneghan, Amanda Band, Zoya Georgieva. (2015) A BEME systematic review of UK undergraduate medical education in the general practice setting: BEME Guide No. 32. Medical Teacher 37:7, pages 611-630. - Shona JK, Piercy H, Ibbotson R, et al. Who attends out-of-hours general practice appointments? Analysis of a patient cohort accessing new out-of-hours units. BMJ open. 2018; 8(6), p.e020308.

VERSION 1 – AUTHOR RESPONSE

REVIEWER 1 COMMENTS	RESPONSE	LINE
Authors have attempted to answer a very interesting question regarding clinical presentations on the acute medical take with their relevance to undergraduate medical teaching. They have used plain and easy to understand language that conveys the message to the reader effectively. However, I would like to recommend a few minor points that I believe can enhance the robustness of the study and the quality of this manuscript.	Many thanks for your positive comments.	NA
1. Some of the presentations rarely occur in isolation, For example, authors have plotted dyspnoea, cough, wheeze and hypoxia, all separately. It is not uncommon for patients with a cough to have some shortness of breath and similarly, those with wheeze often have a cough, too. It would be extremely rare to find hypoxia in the absence of a feeling of breathlessness. In view of this, I wonder whether authors would like to group some of these symptoms together or clarify for the reader if the symptom occurred in isolation. Whilst according to the data. dyspnoea equally presents both in-hours and OOH; 'hypoxia' only appeared to present OOH! Is it merely because we are doing more blood gas analyses OOH? I think we would need to remove some of the confounding factors.	Thank you for this really important comment. We have examined the original data thoroughly and grouped together cardiorespiratory symptoms to identify the difference in the frequency of patients admitted with multiple presentations IH vs OOH, please see results. We have also acknowledged ithe potential confounding factors regarding investigations OOH in the discussion.	P6 L182-183 P7 L201-203
It would be useful to see a graph of the demographic data and also the source of admission (GP Vs A&E)	Many thanks for this helpful comment. We have included additional graphs to demonstrate the demographic data based on your suggestion. Unfortunately, we do not have the data regarding the source of admission, but we have acknowledged this as a limitation in the discussion.	P6 L164-165 P8 L234-237
3. If available, the data regarding EWS (early warning score) on the presentation can really	Thank you for raising this excellent	P8 L234-237

strengthen the argument whether medical schools need to formalize some OOH experience for medical students. Especially, if this shows patients admitted OOH are often the sickest ones.	point. Unfortunately, we do not have the data regarding EWS, but we have again acknowledged this as a limitation in the discussion.	
4. The duration of the study is rather short and its timing in summer probably does not represent the true face of medical take in the UK.	Thank you for raising this important point. We have acknowledged this limitation in the manuscript.	P8 L231-234
5. In the limitation, authors must consider that the current medical force structure covering the OOH medical shifts is already thinly stretched, and if in addition to delivering demanding clinical work, they are expected to provide some on-the-floor training for undergrad students, how would they manage? A reference to 'task based learning' may be useful in that context.	Thank you for this important comment. We have highlighted the balance required in managing teaching capacity OOH, as well as other demands and the potential impact on student availability for in-hours teaching. We have also included more details about how student-led teaching can be implemented OOH, and have included referenced for “Task-based learning”.	P8 L224-229
6. It may worth considering RCP acute care toolkit 5 - teaching on the acute medical units to explore some possible solutions.	Thank you for bringing this to our attention. We have included this in our discussion about implementation of OOH teaching. The reference has also been added.	P8 L224-229
REVIEWER 2 COMMENTS	**RESPONSE**	**LINE**
Thank you for giving the opportunity to review your manuscript submitted to BMJ Open. In this paper you present the number of clinical presentations in an EM department over a 14-day period with a special focus on out-of-hours presentations. You report interesting data to inform curriculum designers on opportunities to encounter certain emergencies.	Many thanks for your positive comments.	NA
I read the submission with interest, however, I think the present manuscript could be substantially improved by elaborating on its curricular and clinical context. In respect to the curricular aspect, it should be made clear the aim and the weight of the EM placement in question (i.e., what are the (overarching) learning goals, tasks to be performed, relative importance within the curricular blue print; at what time of training is this placement localized (year of training, what sessions does the placement build on (previous clinical courses, e-learning, lectures), where does it lead to). Clarifying these points would help to better understand the relevance of your findings.	Many thanks for raising these important points. We have incorporated the details of the overarching learning goals, tasks to be performed, relative importance, time of training and subsequent clinical courses into the introduction.	P4 L110-129
Related to the clinical context, the reader would like to have a view whether it’s feasible to achieve sufficient numbers of emergency encounters for a given student. Since the number of cases is limited, this circumstance may in turn	Many thanks for this insightful comment. Our data represents the potential exposure to acute medical presentations over a	P7 L191-194 P8 L238-241

limit the number of students to be included into a programme. Clearly, the frequency of cases (exposure) is an important issue in EM, which is very evident for e.g. resuscitations (which do not occur often in the real clinical world). If a programme was unable to achieve adequate exposure, additional learning strategies should be pursued (e-learning, simulation). Perhaps you could provide numbers how often a student would be able to encounter a specific emergency, provided he or she went through a one-week placement.	continuous 2 weeks period (336 hours). To achieve the same number of hours of exposure, students would need to spend 8 weeks on the AMU placement, if they did 5x 8hr shifts per week. We agree that it is likely adequate exposure will only be feasible with increased OOH opportunities and placements elsewhere. Whist we have presented the presentations profile at a single teaching hospital, further studies across multiple hospitals will be needed to explore the presentations students encounter during their timetabled activities. We have included this in the discussion.	
The title: appears a bit misleading as 'learning opportunities' are not limited to the pure number of presentations. Also important are: involvement of students, educational suitability (as a basis for discussion/debriefing, etc.). Rather ?: 'Number of emergency presentations medical students may encounter during acute medical placements'.	Many thanks for highlighting this. We have removed the reference to learning opportunities to avoid confusion and have changed the title to better reflect that we are looking at presentations encountered.	P1 L1-2 P2 L50-51
Background: first sentence, line 57: I'd like to challenge this statement (or its wording). If true learning hours were counted, the majority of learning is related to theoretical content. Maybe, you re-word the sentence towards importance in clinical education ('clinical placements are essential …'). The second sentence appears vague, and in the next sentences I'm unable to follow the argument of (real) emergencies not being seen in hospitals. Perhaps, this a national development – this would limit your study rationale to the UK context. However, I think your work has a more generalizable scope: As discussed above, the main curricular question is HOW we can achieve to expose undergraduates to an adequate number of emergencies. As you showed, the number of cases IS limited, and strategies to meet these limitations are necessary. I think this would be a justifiable conclusion of your findings (in face of the limitation you acknowledged).	Thank you for your important comments. We have reworded the first sentence to focus on the importance of clinical placements. We have further reworded the following sentences to improve the flow of discussion to highlight how changes to the healthcare delivery system may redirect patients. We have also emphasised the limited number of clinical presentations in hours. We have also included more details in the discussion regarding how more OOH teaching strategies can be implemented and included references based on your suggestions.	P4 L96-98 P6 L196-197 P8 L224-229
Methods: as stated above, more information on the context needs to be provided. In respect to electronic patient records, did anyone objectify the clinical symptoms (with the question behind: it remains unclear whether these cases possessed educational value.).	Many thanks for this helpful comment. We have included the contextual details as suggested. The clinical presentations in the study were objectified.	P4 L121-129
Analysis: did you present this comparison? – I did	Many thanks for raising this.	P5 L144-

not find a respective section, neither in the results, nor in the discussion section.	We apologise for the confusion and have clarified in the analysis that the presentations used in the data collection were the ones set out in the curriculum rather than compared.	145
Ethics: I did not a statement within the manuscript.	We were advised by the chair of the medical education ethics committee (MEEC) at Imperial College London that as the clinical presentations were logged anonymously by medical students, and no patient identifiable information was documented, this was essentially a service evaluation and did not require ethical approval.	P5 L139-141
Discussion: - see 'analysis': this point appears interesting and could be taken up.	Thank you for this comment. We have addressed this suggested.	P5 L144-145
p.4, l 44/45: this remains speculation. However, it is of vital importance to treat these patients as soon as possible and direct transfer to endovascular interventional facilities is the gold standard. Shouldn't we acknowledge that for acute stroke and AMI the ED might not be the appropriate learning environment anymore? The discussion could elaborate a bit more on the implications drawn from your findings.	Thank you for this comment. We agree that the AMU clinical placements in its current form may not be best placed to cover all the acute presentations anymore. We have further clarified the need for review of this placement and considerations for other settings.	P7 L220-222
The reference list appears a bit 'thin'. Maybe, you could integrate some literature on topics related to an expanded Discussion section.	Thank you for this comment. We have significantly expanded the references based on the comments and suggestions given.	P9 L253-261, 282-299
In summary, I think the data are worth reporting, but need a bit more context. Looking forward to a revision.	Thank you for your helpful comments. We hope the revised manuscript will provide the additional context required.	NA
REVIEWER 3 COMMENTS	**RESPONSE**	**LINE**
I was pleased to see an education article, especially as it is currently topical by looking at the delivery of medical education in the acute care setting. This paper has potential but there are a number of omissions particularly in the methodology and discussion, and limited results which restrict its utility. I have given further detail in my comment below.	Many thanks for your positive comments.	NA
Abstract P 3, line 8-10 The objective states 'To identify the availability and variability of learning opportunities on an acute medical…' I think you need to add in	Thank you for this helpful comment. We have included this in the abstract as suggested.	P2 L55-56

'through patient presentations' which you have included in the aims in the main text (page 4, line 30). This is important as the study only answers the question of availability and variability of clinical presentations and does not establish the full learning opportunities of an acute medical setting.		
P3, line 33-34 'Chest pain and hemiparesis were the ninth and 52nd most commonly seen, respectively.' I'm not sure how clear this statement is for the abstract. Perhaps it would be better to state that Important curriculum conditions such as hemiparesis was not a common presentation. You can expand in the results/ discussion.	Many thanks for this comment. We have reworded the sentence as suggested.	P3 L75-77
Methodology P 4, line 36-45 I feel that the methodology needs expanding. It is not clear who collected the data? How did you ensure that the data that was collected was accurate, did you double code any data collection? Was the data all collected from electronic records or where physical notes and observation charts reviewed? Were all the admission notes reviewed during the 14 day period or were any unavailable/ incomplete?	Many thanks for this helpful comment. We have expanded the methodology details as suggested and clarified that all notes were captured.	P5 L139-143 P6 L158-159
P 4, line 47 I can see you have stated no patient involvement, but I can't see a comment about ethics, was this study approved by your university ethics committee? I appreciate that patients were not involved but it would be common practice to have a statement about ethics. Considerations include how the data collection was anonymised and how this electronic data is being stored.	We were advised by the chair of the medical education ethics committee (MEEC) at Imperial College London that as the clinical presentations were logged anonymously by medical students, and no patient identifiable information was documented, this was essentially a service evaluation and did not require ethical approval.	P5 L139-141
Results P5, line 16-17. You state – 'The 359 admissions represented 91 unique presentations, of which 63.7% were more commonly seen in out-of-hours (Figure 1).' When I look at figure 1 this shows 27 presentations not 91, it would help to elaborate what figure 1 is representing. You do not make any reference to the 36.3% of presentations that are seen more commonly in hours?	Thank you for highlighting this. Apologies that this was not clear in the original manuscript. The figure highlights 28 selected presentations which are part of the core teaching in the Year 3 curriculum at ICSM. We have also removed the reference to this figure when discussing the percentage of presentations.	P6 L174, 176-177
Figure 1 – The X-axis appears to be describing number of cases per hour during in hours vs out of hours, this isn't an obvious graphical representation. It may helpful In the explain in the title or results how this is represented.	Thank you for highlighting this. We have clarified the title of the figure and that the X axis represents number of presentations per hour. Blue represents number of patients presenting in-hours	P6 L176-177

	and orange represents patients presenting out-of-hours.	
P5, line 29 – 30. You state that 'Notably, presentations such as chest pain and hemiparesis were the ninth and 52nd most common….'. I'm not quite sure why this is 'notably', I presume you mean because these are important conditions in the medical curriculum and you had presumed they would have presented more. It may be better to avoid 'notably'. I don't find this particularly notable as in my experience most hemiparesis cases would go directly via ED/ stroke services rather than the acute medical unit. It may be better to state the result and it may add more weight to state what this represents as number of cases rather than just 52nd most common presentation, for example hemiparesis (2 cases) was the 52nd most common presentation.	Thank you for this helpful comment. We have removed the word "notably". We have also stated the number of cases for chest pain and hemiparesis in the revised manuscript.	P6 L185
You mention in your data collection that you looked at the time of the admission, but in the results you only comment on case presentation numbers in terms of in hours vs out of hours, did the data show any particularly busy periods? This may be of relevance when thinking of medical placements.	This is a really important comment and thank you for raising this. We have reviewed the original data and timings of admissions and found the busiest admission period on AMU is between 2100-0100. We have included this very useful point in the results.	P6 L168-171
Discussion I think the discussion needs further work and referencing to ensure that the discussion and conclusion are justified by the results.	Thank you for your review. We have revised the discussion section based on your helpful suggestions and have included additional references.	P9 L253-261, 282-299
P5, line 39-41. I wonder if it is important in your discussion to mention the proportion of hours in out of hours vs in hours. You state more conditions are seen out of hours, but you don't make a reference to the fact that in hours only accounts for 40hours / week whilst out of hours is 128 hours. This is again repeated in line 44-45 where you state 'Fewer clinical presentations may have been admitted to the hospital in-hours due to expanded primary care and community services.' Whilst this might be a contributor I think there may be other factors to explore and reference, not least that in hours only represets 40 hours / week or referrals from primary care await transport to get there.	Apologies for not making this clear in the original manuscript. We have reported the in-hour and out-of-hours presentations **per hour equivalent** in order to adjust for the longer duration of the OOH period. We have also incorporated additional explanations, including the transportation lag suggested by the reviewer.	P5 L153 P7 L200, L201-203
P5, line 40. What do you mean by 'important' presentations? I'm presuming you mean those that are key on the clinical curriculum	Thank you for this comment. We have corrected the wording as suggested.	P7 L196-197
P5, line 46-47. You state that Chest pain and hemiparesis presented 'less than expected', it maybe worth clarifying than who expected? Perhaps re-phrase that theses didn't seem to occur very much compared to other	Thank you for this insightful comment. We have rephrased this to ensure more accurate representation of the results.	P7 L205

presentations. As mentioned before this doesn't surprise me.		
P5, line 52-52 – Have you got a reference to support your statement 'With most undergraduate acute medical clinical placements scheduled in-hours at teaching hospitals'. Our medical students are on a 24 hour rota in acute medical ward.	Thank you for highlighting this to us. We have revised the wording and have added a reference.	P7 L210-213
P5, line 53 – I'm not sure your results fully support this statement 'students may be exposed to fewer, less variable and less acute presentations.' As you state that all conditions bar hypoxia were seen in hours and in hours accounts for a lot less time than out of hours so a student may see the same variety and amount in an 8 hours period in hours or out of hours. It may be true that out of hours offers additional and potentially under used educational resources.	Thank you for highlighting this to us. We have further clarified in the manuscript that the statement refers to the difference seen **per hour** in OOH compared to in-hours.	P7 L210-213
P5, line 58 – 60 - 'Our findings suggest that students may require additional exposure to particular presentations….' This suggests that medical students learn in just the acute medical unit, surely students already have placements in specialist settings and other wards. I wonder if it is more accurate say that certain conditions are better seen and learnt about from the acute medical unit than other conditions. That certain conditions such as stroke may not be seen during an acute medical attachment and suggest that the curriculum should include exposure to these conditions elsewhere.	Thank you for your insightful comment. We have reworded this section to better reflect how certain conditions are better seen in acute placements, and the need to gain exposure elsewhere in the curriculum.	P7 L216-222
The discussion suggests that out of hours might provide additional opportunities for students but I can't see a balanced discussion about difficulties to out of hours placements such as teaching capacity, the quality of learning from the presentations or missing out on in hours teaching.	Thank you for this important comment. We have included a more balanced discussion regarding the impact of increasing OOH placements in the discussion.	P8 L224-229
References This article would improve with more expansive references, particularly to expand the discussion. I would suggest some further reading and try to include some bigger and more recent observational studies on the subject. Some references, but not exclusive that may be relevant include - Sophie Park, Nada F. Khan, Mandy Hampshire, Richard Knox, Alice Malpass, James Thomas, Betsy Anagnostelis, Mark Newman, Peter Bower, Joe Rosenthal, Elizabeth Murray, Steve Iliffe, Carl Heneghan, Amanda Band, Zoya Georgieva. (2015) A BEME systematic review of UK undergraduate medical education in the general practice setting: BEME Guide No. 32. Medical Teacher 37:7, pages 611-630. - Shona JK, Piercy H, Ibbotson R, et al. Who attends out-of-hours general practice appointments? Analysis of a patient cohort accessing new out-of-hours units. BMJ open. 2018; 8(6), p.e020308.	Thank you for your helpful comment. These are really helpful references. We have included these in the now expanded discussion.	P9 L253-261, 282-299

VERSION 2 – REVIEW

REVIEWER	Dr Tahir Nazir Lancashire Teaching Hospitals NHS Foundation Trust Royal Preston Hospital, Preston PR29HT
REVIEW RETURNED	17-Oct-2020

GENERAL COMMENTS	The manuscript provides a balanced insight into the acute medical presentations in the AMU and their educational utility for undergraduate education. Authors have made necessary changes in line with the reviewer feedback.

REVIEWER	Jan Breckwoldt University Hospital Zurich Institute of Anesthesiology Raemistr. 100 8091 Zurich Switzerland
REVIEW RETURNED	29-Sep-2020

GENERAL COMMENTS	thank you for all the changes made. From my perspective, you substantially improved the paper.

VERSION 2 – AUTHOR RESPONSE

REVIEWER 1 COMMENTS	**RESPONSE**	**LINE**
The manuscript provides a balanced insight into the acute medical presentations in the AMU and their educational utility for undergraduate education. Authors have made necessary changes in line with the reviewer feedback.	Your feedback is greatly appreciated.	NA
REVIEWER 2 COMMENTS	**RESPONSE**	**LINE**
Dear authors, thank you for all the changes made. From my perspective, you substantially improved the paper.	Your feedback is very much appreciated.	NA