

## Guide to American Medical Association (AMA) Manual of Style, 10<sup>th</sup> Edition

### General Notes about References (p40-41)<sup>1</sup>

- Purposes of references: documentation, acknowledgement, & directing/linking the reader to more information
- ALL authors are responsible for ALL reference citations
- Always consult primary source and never cite a reference you yourself have not read
- Whatever reference style is used (eg, AMA, NLM), consistency is imperative

### Formatting Citations (p39-71)<sup>1-3</sup>

- Each reference is separated into bibliographic groups by a period. Within each group, commas, semi-colons, or colons are used.
- Include as much information as you have. If the information is not available, leave it out.
- **Authors:** Use authors' surname followed by their initials without periods. If there are ≤ 6 authors, all should be named. If there are > 6 authors, list the first 3 followed by "et al." Roman numerals and "Jr/Sr" follow the initials. Original spelling and capitalization of surnames with prefixes or particles (eg, von, de, La, van) are retained.
- **Titles:** Retain the spelling, abbreviations, style (eg, capitalization) of the original title (including numbers). Exception: numbers at the beginning of the title should be spelled out (except specific years (eg, 1948).
- **Journal:** Use NLM-abbreviated titles (eg, N Engl J Med). Search titles here: <http://www.ncbi.nlm.nih.gov/nlmcatalog/journals>. Information about abbreviated titles: <https://www.nlm.nih.gov/tsd/cataloging/constructitleabbe.html>.
- AMA does not provide official guidance for formatting citations on curriculum vitae (CVs). Presentations and posters that are part of academic coursework may be appropriate for pharmacy students to include on their CV. For consistency, Concordia University Wisconsin School of Pharmacy (CUW SOP) students should follow the recommended formats below on their CV.

Citation Type	Format	Example
<b>Journal article (print)</b>	Author(s). Title. <i>Journal</i> . Year;Volume(Issue):Page number(s).	Rainer S, Thomas D, Tokarz D, et al. Myofibrillogenesis regulator 1 gene mutations cause paroxysmal dystonic choreoathetosis. <i>Arch Neurol</i> . 2004;61(7):1025-1029.
<b>Journal article (online)</b> 1. With URL 2. With DOI 3. Published ahead of print	Author(s). Title. <i>Journal</i> . Year;Volume(Issue):Page number(s). URL. Published date. Updated date. Accessed date.  Author(s). Title. <i>Journal</i> . Year;Volume(Issue):Page number(s). DOI.  Author(s). Title [published online ahead of print <i>date</i> ]. <i>Journal</i> . Year;Volume(Issue):Page number(s). DOI.	Duchin JS. Can preparedness for biological terrorism save us from pertussis? <i>Arch Pediatr Adolesc Med</i> . 2004;158(2):106-107. <a href="http://archpedi.ama-assn.org/cgi/content/full/158/2/106">http://archpedi.ama-assn.org/cgi/content/full/158/2/106</a> . Accessed June 1, 2004.  Smeeth L, Iliffe S. Community screening for visual impairment in the elderly. <i>Cochrane Database Syst Rev</i> . 2002;(2):CD001054. doi:10.1002/14651858.CD1001054.  van der Hoek L, Pyrc K, Jebbink MF, et al. Identification of a new human coronavirus [published ahead of print March 21, 2004]. <i>Nat Med</i> . doi:10.1038.nm1024.
<b>Book chapter (print)</b>	Chapter author(s). Chapter title. In: Book author(s) or editor(s). <i>Book title</i> . Volume number and title. Edition number (do not indicate 1 <sup>st</sup> edition). Place of publication: Publisher; Year:Page number(s).	Solensky R. Drug allergy: desensitization and treatment of reactions to antibiotics and aspirin. In: Lockey P, ed. <i>Allergens and Allergen Immunotherapy</i> . 3 <sup>rd</sup> ed. New York, NY: Marcel Dekker; 2004:585-606.
<b>Book chapter (online)</b>	Chapter author(s). Chapter title. In: Book author(s) or editor(s). <i>Book title</i> . Volume number and title. Edition number (do not indicate 1 <sup>st</sup> edition). Place of publication: Publisher; Year:Page number(s). URL. Accessed date.	Resnik NM. Geriatric medicine. In: Braunwald E, Fauci AS, Isselbacher KJ, et al, eds. Harrison's Online. Based on: Braunwald E, Hauser SL, Fauci AS, Kasper DL, Longo DL, Jameson JL, eds. Harrison's Principles of Internal Medicine. 15 <sup>th</sup> ed. New York, NY: McGraw-Hill; 2001. <a href="http://www.hslls.pitt.edu/resources/documentation/harrisoninfo.html">http://www.hslls.pitt.edu/resources/documentation/harrisoninfo.html</a> . Accessed December 6, 2005.
<b>Book (print)</b>	Book author(s) or editor(s). <i>Book title</i> . Volume number and title. Edition number (do not indicate 1 <sup>st</sup> edition). Place of publication: Publisher; Year.	Adkinson N, Yunginger J, Busse W, Bochner B, Holgate S, Middleton E, eds. <i>Middleton's Allergy: Principles and Practice</i> . 6 <sup>th</sup> ed. St Louis, MO: Mosby; 2003.

<b>Book (online)</b>	Book author(s) or editor(s). <i>Book title</i> . Volume number and title. Edition number (do not indicate 1 <sup>st</sup> edition). Place of publication: Publisher; Year. URL. Accessed date.	Lunney JR, Foley KM, Smith TJ, Gelband H, eds. Describing Death in America: What We Need to Know. Washington, DC: National Cancer Policy Board, Institute of Medicine; 2003. <a href="http://www.nap.edu/books/0309087252/html/">http://www.nap.edu/books/0309087252/html/</a> . Accessed December 6, 2005.
<b>Website</b>	Author(s). Title of item cited. Name of Web site. URL. Published date. Updated date. Accessed date.	Antimicrobial Resistance. Infectious Diseases Society of America. <a href="http://www.idsociety.org/Topic_Antimicrobial_Resistance/">http://www.idsociety.org/Topic_Antimicrobial_Resistance/</a> . Accessed July 21, 2014.
<b>Drug Information Database</b>	Author(s). Title of entry. In: Title of database [database online]. Place of publication: Publisher; Year. URL. Updated date. Accessed date.	Acetaminophen poisoning. In: DynaMed [database online]. Ipswich, MA: EBSCO Information Services. <a href="http://0-search.ebscohost.com.topcat.switchinc.org/login.aspx?direct=true&amp;site=DynaMed&amp;id=113862">http://0-search.ebscohost.com.topcat.switchinc.org/login.aspx?direct=true&amp;site=DynaMed&amp;id=113862</a> . Updated March 09, 2010. Accessed March 23, 2010.
<b>Monograph</b>	Author(s). Monograph. In: Title of database [database online]. Place of publication: Publisher; Year. URL. Updated date. Accessed date.	Minoxidil. In: Lexicomp, Lexi-Drugs [database online]. St. Louis, MO: Wolters Kluwer Health, Inc; 2005. <a href="http://0-online.lexi.com.topcat.switchinc.org/lco/action/doc/reretrie/docid/patch_f/1799123">http://0-online.lexi.com.topcat.switchinc.org/lco/action/doc/reretrie/docid/patch_f/1799123</a> . Updated July 8, 2014. Accessed July 24, 2014.
<b>Government/ Organization Reports</b>	Author(s). <i>Title</i> . Place of publication: Name of issuing organization; Year. Page(s)/ publication/ series numbers.	Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance, 2000. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2000.
<b>Government/ Organization Reports (online)</b>	Author(s). <i>Title</i> . Place of publication: Name of issuing organization; Year. Page(s)/ publication/ series numbers. URL. Published date. Updated date. Accessed date.	World Health Organization. Equitable access to essential medicines: a framework for collective action. <a href="http://whqlibdoc.who.int/hq/2004/WHO_EDM_2004.4.pdf">http://whqlibdoc.who.int/hq/2004/WHO_EDM_2004.4.pdf</a> . Published March 2004. Accessed December 6, 2005.
<b>Package inserts</b>	Drug. [package insert]. Place of manufacturing: Manufacturer; Year.	Cialis [package insert]. Indianapolis, IN: Eli Lilly & Co; 2003.
<b>Patents</b>	Inventor(s), inventors; Company, assignee. Title. Patent number. Patent date.	Guiliano K, Kapur R, inventors; Cellomics Inc, assignee. System for cell-based screening. US patent 6,875,578. March 15, 2005.
<b>Unpublished Material (accepted for publication)</b>	Author(s). Title. Journal. In press.	Carrau RL, Khidr A, Crawley JA, Hillson EM, Davis JK, Pashos CL. The impact of laryngopharyngeal reflux on patient-reported quality of life. <i>Laryngoscope</i> . In press.
<b>Unpublished Material (submitted for publication)</b>	<i>In-text only (author(s), unpublished data, date)</i> <i>Do not include in reference list</i>	(H. E. Marman, MD, unpublished data, July 2019)
<b>Conference Presentations</b>	Author(s). Title. Poster/Paper presented at: Meeting name; Date(s); Location.	Weber KJ, Lee J, Decresce R, Subjasis M, Prinz R. Intraoperative PTH monitoring in parathyroid hyperplasia requires stricter criteria for success. Paper presented at: 25 <sup>th</sup> Annual American Association of Endocrine Surgeons Meeting; April 6, 2004; Charlottesville, VA.
<b>Conference Presentations (online)</b>	Author(s). Title. Poster/Paper presented at: Meeting name; Date(s); Location. URL. Accessed date.	Chu H, Rosenthal M. Search engines for the World Wide Web: a comparative study and evaluation methodology. Paper presented at: American Society for Information Science Annual Conference; October 19-24, 1996; Baltimore, MD. <a href="http://www.asis.org/annual-96/electronicproceedings/chu.html">http://www.asis.org/annual-96/electronicproceedings/chu.html</a> . Accessed February 26, 2004.
<b>Presentations in an Academic Course (eg, posters, oral presentations) [FOR CV USE ONLY]</b>	Author(s)*. Title. Poster/Paper presented to Audience for Course Number and Course Title; Date(s); Location.  <i>*bold your own name</i>	Smith J, <b>Jones T</b> , Peterson G, Johnson C, Martin M, Carlson P. Great Plantain and Helichrysum Italicum: Bosnian Alternative Therapies. Presentation to faculty and students in CUW SOP Phar 382 IPPE-2 course; April 2016; Mequon, WI.

## Reference List (p41-42)<sup>1,4</sup>

List references in numerical order (ie, consecutively as they appear in the document/presentation; NOT alphabetical order)

1. Hall JE, Brands MW. Intrarenal and circulating angiotensin II and renal function. In: Robertson JIS, Nicholls MG, eds. *The Renin-Angiotensin System*. London: Gower Medical, 1993.
2. Weber KT, Brilla CG. Pathological hypertrophy and cardiac interstitium: fibrosis and renin-angiotensin-aldosterone system. *Circulation*. 1991;83:1849-1865.
3. Weber KT, Villarreal D. Aldosterone and antialdosterone therapy in congestive heart failure. *Am J Cardiol*. 1993;71:3A-11A
4. Barr CS, Lang CC, Hanson J, Arnott M, Kennedy N, Struthers AD. Effects of adding spironolactone to an angiotensin-converting enzyme inhibitor in chronic congestive heart failure secondary to coronary artery disease. *Am J Cardiol*. 1995;76:1259-1265.
5. Staessen J, Lijnen P, Fagard R, Verschueren LJ, Amery A. Rise in plasma concentration of aldosterone during long-term angiotensin II suppression. *J Endocrinol*. 1981;91:457-465.

During the draft phase of your document, it is often easiest to use parenthetical citations with the author's last name as place-holders until the document/presentation is complete; then put the citations in numerical order on the final version

### DRAFT

Aldosterone is known to be important in the pathophysiology of heart failure.(Hall; Weber (1991); Weber (1993); Barr) Many clinicians have assumed that angiotensin-converting enzyme (ACE) inhibitors, by inhibiting the conversion of angiotensin I to angiotensin II, inhibit the production of aldosterone. Increasing evidence, however, suggests that currently recommended and usual doses of ACE inhibitors do not completely suppress aldosterone production.(Staessen)



### FINAL

Aldosterone is known to be important in the pathophysiology of heart failure.<sup>1-4</sup> Many clinicians have assumed that angiotensin-converting enzyme (ACE) inhibitors, by inhibiting the conversion of angiotensin I to angiotensin II, inhibit the production of aldosterone. Increasing evidence, however, suggests that currently recommended and usual doses of ACE inhibitors do not completely suppress aldosterone production.<sup>5</sup>

Another helpful option to stay organized during the draft phase of your document is to use a reference management software program, which allows you to manage references by helping you to enter/import, retrieve, format, and export citations. Some programs are available for free and others require a subscription. The most common examples of reference management software programs used in pharmacy are: Mendeley, Zotero, EndNote, and Refworks.

## Numbering (p42-44)<sup>1,4</sup>

Number references consecutively with superscript Arabic numerals, including text, tables, or figures

Aldosterone is known to be important in the pathophysiology of heart failure.<sup>1-3</sup> Many clinicians have assumed that angiotensin-converting enzyme (ACE) inhibitors, by inhibiting the conversion of angiotensin I to angiotensin II, inhibit the production of aldosterone. Increasing evidence, however, suggests that currently recommended and usual doses of ACE inhibitors do not completely suppress aldosterone production.<sup>5</sup>

Citation<sup>1,3,5-7,10-13,15,18,19,21</sup> → Citation\*

Place superscript numerals outside periods and commas, inside colons and semicolons

Citation<sup>1,2</sup>

Citation,<sup>1,2</sup>

Citation<sup>1,2</sup>:

Citation<sup>1,2</sup>;

Do NOT place a superscript reference immediately after a number or abbreviated unit of measure

Table 1<sup>3</sup>; 50 m<sup>2</sup>

For 2 or more references cited at a given place:

- Use hyphens to join the first and last numbers of a closed series

Citation<sup>1-4</sup>

- Use commas without a space to separate other parts of a multiple citation

Citation<sup>1-2,4</sup>

- If a multiple citation involves many references and creates the appearance of a hole (usually 20-25 characters or more), use an asterisk in the text and give the citation in a footnote

You may cite page numbers within superscript reference

Citation<sup>2(p67),3</sup>

Be sure to cite often enough throughout the document/presentation so that the reader can know where you got the information, but be careful not to cite too often (ie, do not only include your list of references and not cite throughout; if several *consecutive* sentences are from the same reference, you may only cite the first sentence)

### In-Text Citations (p41)<sup>1</sup>

Citations for references not yet accepted for publication or personal communications (oral, written, and electronic) should NOT be included in the reference list, but should be included parenthetically in the text

- |   |
|---|
| As described in recent literature (H. E. Marman, MD, unpublished data, July 2019)...  |
| In a conversation with Dr. Smith (March 2019)...  |
| According to Dr. Kostrzewa (Introduction to Tertiary References lecture, September 2018, Concordia University Wisconsin, School of Pharmacy)... |

Other in-text citations for references that should be included in a reference list are not common in most professional documents (except presentations, see below) and should be reserved for circumstances where reference lists are not used (eg, news articles)

### PowerPoint Presentations<sup>1,5</sup>

AMA does not provide official guidance on PowerPoint presentations. However, just like any other piece of work, it is important to give credit to your sources.

At a minimum, all presentations should include a reference slide at the end with AMA formatted citations.

REFERENCES	REFERENCES
<ol style="list-style-type: none"> <li>1. American Geriatrics Society. <i>Five Things Physicians and Patients Should Question. Choosing Wisely: An Initiative of the ABIM Foundation</i>. 2013.</li> <li>2. Chapter 1. Clinical implications of the Aging Process. In: Kane RL, Guslander JG, Abrass IB, Resnick B, Kane R.L., Guslander J.G., Abrass I.B., Resnick B eds. <i>Essentials of Clinical Geriatrics, 7e</i>. New York, NY: McGraw-Hill; 2013. <a href="http://accessmedicine.mhmedical.com/content.aspx?bookId=678&amp;SectionId=44833878">http://accessmedicine.mhmedical.com/content.aspx?bookId=678&amp;SectionId=44833878</a>. Accessed April 23, 2014.</li> <li>3. Cauffman J. Chapter 9. General Psychiatry. In: Dugan J, El-Ibiary S, Foote EF, et al. <i>Updates in Therapeutics 2014: Pharmacotherapy Preparatory Review and Recertification Course</i>, 2014 ed. Lenexa, KS: American College of Clinical Pharmacy, 2014.1-39-78.</li> <li>4. Cremens MC. Chapter 70. Geriatric Psychiatry. In: Stern TA, Rosenbaum JF, Fava M et al. <i>Massachusetts General Hospital Comprehensive Clinical Psychiatry</i>. 1<sup>st</sup> ed. Maryland Heights, MO: Mosby, Inc.; 2008.</li> <li>5. Downing LJ, Caprio TV, Lyness JM. Geriatric Psychiatry Review: Differential Diagnosis and Treatment of the 3 D's - Delirium, Dementia, and Depression. <i>Current Psychiatry Reports</i>. 2013;15:365.</li> </ol>	<ol style="list-style-type: none"> <li>6. Hutchison LC, Sleeper RB. <i>Fundamentals of Geriatric Pharmacotherapy: An Evidence-Based Approach</i>. Bethesda, MD: American Society of Health-System Pharmacists, Inc.; 2010.</li> <li>7. Madhusoodanan S, Ibrahim FA, Malik A. Primary prevention in geriatric psychiatry. <i>Annals of Clinical Psychiatry</i>. 2010;22(4): 249-61.</li> <li>8. Singer CM, Luxenberg J, Eekstrom E. Chapter 11. Older Patients. In: Feldman MD, Christensen JF, eds. <i>Behavioral Medicine: A Guide for Clinical Practice</i>, 3rd ed. New York: McGraw-Hill; 2008. <a href="http://www.accessmedicine.com/content.aspx?aID=6440096">http://www.accessmedicine.com/content.aspx?aID=6440096</a>. Accessed December 20, 2013.</li> <li>9. Trombetta DP. Chapter 2. Geriatrics. In: Dugan J, El-Ibiary S, Foote EF, et al. <i>Updates in Therapeutics 2014: Pharmacotherapy Preparatory Review and Recertification Course</i>, 2014 ed. Lenexa, KS: American College of Clinical Pharmacy, 2014.1-39-78.</li> <li>10. Williams K. <i>The Influence of Communication on Older Adults with Dementia</i>. [PowerPoint]. Iowa City, IA: University of Iowa College of Nursing; 2014.</li> </ol>

*(Kostrzewa, Geriatric Psychiatry, April 2014, Concordia University Wisconsin, School of Pharmacy)*

Ideally, you should also cite individual slides. There are several ways to do this. Make sure to ask your instructor what they prefer before formatting your citations. Two possible examples are given here:

#### Superscript

(in numerical order; much correspond with reference list)

#### In-text

(Bottom of slide; in parentheses; may be smaller font)

AGE-RELATED PSYCHOLOGICAL CHANGES <sup>6,8</sup>	AGE-RELATED PSYCHOLOGICAL CHANGES								
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Consistent/Improves with Age</td> <td style="width: 50%; border: none;">Worsens/Declines with Age</td> </tr> <tr> <td style="border: none;"> <ul style="list-style-type: none"> <li>■ Temperament</li> <li>■ Personality</li> <li>■ Judgment</li> <li>■ Knowledge</li> <li>■ Verbal skills</li> </ul> </td> <td style="border: none;"> <ul style="list-style-type: none"> <li>■ Memory</li> <li>■ Processing speed</li> <li>■ Problem solving</li> <li>■ Efficiency of sleep</li> </ul> </td> </tr> </table>	Consistent/Improves with Age	Worsens/Declines with Age	<ul style="list-style-type: none"> <li>■ Temperament</li> <li>■ Personality</li> <li>■ Judgment</li> <li>■ Knowledge</li> <li>■ Verbal skills</li> </ul>	<ul style="list-style-type: none"> <li>■ Memory</li> <li>■ Processing speed</li> <li>■ Problem solving</li> <li>■ Efficiency of sleep</li> </ul>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Consistent/Improves with Age</td> <td style="width: 50%; border: none;">Worsens/Declines with Age</td> </tr> <tr> <td style="border: none;"> <ul style="list-style-type: none"> <li>■ Temperament</li> <li>■ Personality</li> <li>■ Judgment</li> <li>■ Knowledge</li> <li>■ Verbal skills</li> </ul> </td> <td style="border: none;"> <ul style="list-style-type: none"> <li>■ Memory</li> <li>■ Processing speed</li> <li>■ Problem solving</li> <li>■ Efficiency of sleep</li> </ul> </td> </tr> </table> <p style="text-align: center; font-size: small; margin-top: 5px;">(Hutchison and Sleeper, 2010; Singer et al, 2008)</p>	Consistent/Improves with Age	Worsens/Declines with Age	<ul style="list-style-type: none"> <li>■ Temperament</li> <li>■ Personality</li> <li>■ Judgment</li> <li>■ Knowledge</li> <li>■ Verbal skills</li> </ul>	<ul style="list-style-type: none"> <li>■ Memory</li> <li>■ Processing speed</li> <li>■ Problem solving</li> <li>■ Efficiency of sleep</li> </ul>
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**Book:** (Author\*, Year, Page(s))

\*Surname only; if 2, list both; if > 2, list first + "et al"


**Journal:** (Journal [abbreviated]. Year;Volume(Issue):Page(s))

**Professional Posters<sup>1,5</sup>**

Follow AMA rules above. Typically, there is a reference section in the bottom left or right corner of the poster and the font size is often smaller than the rest of the poster text.



**Effect of an inter-professional project on pharmacy and physical therapy student's readiness for inter-professional learning**  
 Katie Valdovinos, PharmD, BCPS; Audrey Kostrzewa, PharmD, MPH; Lois Harrison, PT, DPT, MS; Elizabeth Paly, PT, DPT, GCS



**Background**

There is an increasing need in healthcare to provide collaborative, coordinated care among healthcare professionals to optimize patient care. It is imperative that we train our workforce for this inter-professional world and have a method for assessing the effectiveness of inter-professional learning (IPL) activities in our curricula.

The Readiness for Interprofessional Learning Scale (RIPLS) is a 19-item questionnaire developed in 1999 by H. B. Light to assess the readiness of health-care students for shared learning activities<sup>1,4</sup>. For each respondent is asked to identify their degree of agreement using a 5-point Likert scale ranging from "strongly agree" to "strongly disagree"<sup>1,4</sup>. Since its development, RIPLS has been used extensively and modified for use in many organizations and disciplines.

The 19 items were originally categorized into three sub-scales<sup>1</sup>, which were criticized as having low reliability<sup>4</sup>. McFadyen et al. tested and retested a modified four sub-scale model (three of four with demonstrated satisfactory reliability)<sup>1,5</sup>, which is used in this study.

**Objective**

To assess third year student pharmacists' (SPh) and second and third year student physical therapists' (SPT) readiness for IPL using a modified RIPLS questionnaire before and after an IPL experience.

**References**

1. Valdovinos K, Kostrzewa A, Harrison L, Paly E. Effect of an inter-professional project on pharmacy and physical therapy student's readiness for inter-professional learning. Poster presented at: AACP Annual Meeting; July 26-30, 2014. Grapevine, TX.

**Methods**

**Pre-Interaction**

- All students complete a modified RIPLS questionnaire
- All students participate in a 60 minute inter-professional workshop to prepare for the activity

**Senior Interaction #1**

- SPhs learn complete a pharmaceutical care assessment with a community dwelling senior
- Verbal and written communication of findings to SPT teams
- SPhs share their case presentation with pharmacy peers and faculty

**Senior Interaction #2**

- SPT learn complete a fall risk assessment with the senior using the four square step test and educate the senior on an appropriate exercise based on test results
- Written communication of findings to SPhs teams

**Senior Interaction #3**

- SPhs learn follow up with the senior to deliver a senior friendly medication list and discuss any medication related issues

**Post-Interaction**

- All students participate in a 60 minute inter-professional workshop to debrief on the activity
- All students complete a modified RIPLS questionnaire

**Results**

97% of students (198/204) completed surveys both pre- and post- interaction. Individual cohorts are as follows:

Year	Pharmacy	Physical Therapy
1	P1: 98/98 (100.00%)	PT1: 26/26 (100.00%)
2	P2: 24/26 (92.31%)	PT2: 24/26 (92.31%)
3	P3: 28/32 (87.50%)	PT3: 22/22 (100.00%)

Four analyses were completed using IBM® SPSS® Statistics, version 21:

**Category**      **Description**      **Statistically Significant Findings**

P3, PT2&3      Changes in responses (pre to post) among upperclassmen (P3, PT2&3) (paired sample t-test)      Q1: Learning with other students/professionals will make me a more effective member of a health and social care team (p = 0.048)

P3 vs. PT2&3      Changes in responses (pre to post) between upperclassmen SPhs & SPTs (independent sample t-test)      Q2: Patients would ultimately benefit if health and social care students/professionals worked together (p = 0.02)

P3&PT3 vs. P1&PT1      Individual items (each question pre and post) between first-year SPhs/SPTs and first-year SPhs/SPTs (independent sample t-test)      Q10: I don't want to waste time learning with other health and social care students/professionals (p = 0.002)

P3 vs. PT2&3      Number of favorable responses (agree or strongly agree to positive questions) for each sub-scale among upperclassmen SPhs (P3)      Q11: It is not necessary for undergraduate/postgraduate health and social care students/professionals to learn from each other (p = 0.009)

P3 vs. PT2&3      Number of favorable responses (agree or strongly agree to positive questions) for each sub-scale among upperclassmen SPTs (PT3)      Q12: Shared learning will increase my ability to understand clinical situations (p = 0.019)

Statistically significant = p-value < 0.05; Q = question

The fourth analysis was then put into the tested four sub-scale model proposed by McFadyen et al. Due to the modified RIPLS questionnaire used in this study, slight adjustments have been made to which questions were included in each sub-scale.

**Favorable RIPLS Responses for Upper-Classmen (P3, PT2, PT3)**

	SPh (Pre)	SPh (Post)	SPT (Pre)	SPT (Post)
■ Teamwork & Collaboration (#1-9)	96.82%	97.21%	95.83%	96.36%
■ Negative Professional Identity (#10-12)	92.87%	88.10%	86.90%	90.47%
■ Positive Professional Identity (#13-14,16-17)	91.98%	90.13%	92.40%	94.58%
■ Roles & Responsibilities (#18)	82.10%	79.60%	77.80%	87.00%

**Discussion**

Some statistically significant differences in responses were noted between SPh and SPT as well as between the upper class and lower class students on specific questions on the RIPLS. The lack of more significant differences may be related to:

- All SPh and SPT at Concordia University are already at a high level of readiness for IPL
- RIPLS may not be as useful for graduate professional students<sup>7</sup>
- RIPLS may have a ceiling effect in this population
- The modification of the RIPLS used in this study may have altered reliability compared to the version that has undergone reliability testing

Strengths and limitations include:

- Strengths: relatively large sample size (204) compared to previous studies<sup>1,5</sup>; high response rate (97%); varied levels of students and multiple disciplines
- Limitations: use of an untested modified version of the questionnaire; application of the tool originally developed for undergraduate students on a graduate student population

Results indicate that the RIPLS may not be the appropriate assessment tool to measure change as a result of participation in an IPL experience.

IPL should be incorporated into healthcare curricula to prepare graduates for collaborative, coordinated care and meet accreditation standards.

Future studies should continue to determine the most effective assessment method for IPL in health care professional education.

**Superscript citation** (points to superscript 1,4 in Background)

**Reference list** (points to References section)

**References**

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If you have any questions about referencing or the AMA format, please contact your course coordinator or  
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