PBS Data Distribution Project

Software Vendor Working Group #3

8th December 2020

Australian Government
Department of Health

www.health.gov.au

Agenda

1. Welcome and Project Overview
2. Recap of last meeting – 10th Nov 2020
3. Alpha API Overview
4. API Design Principles (Usage expectations)
5. Activity – API Demonstration
6. Discussion – Testing and Feedback
7. Next Steps
8. Other Business and Close

Welcome

PBS Data Distribution Software Vendor Working Group

Thank you to everyone in attendance, together we are modernising the consumption and data distribution model for the monthly PBS Schedule data.

Our goals are to:

- Make the data easier to understand and use in software;
- Improve data latency and data provision through best practice architecture; and
- Improve accessibility to PBS Schedule data for the public and external stakeholders (e.g. software vendors).

Project Overview

Project Scope

- Enhance the provision of PBS Schedule data to consumers, that is fit-for-purpose across the different cohorts of data consumers.
- Distribute PBS Schedule data in a relational format that is more readily consumable and predictable.

Project Timeframes

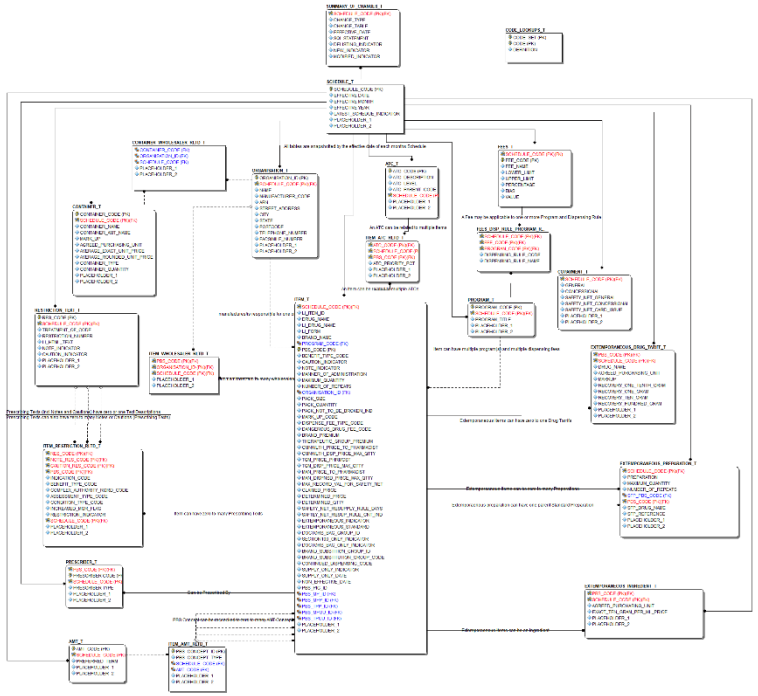
- Stage 1 was completed in June to prove architecture feasibility.
- Stage 2 commenced in July to design and build an Alpha solution for a cohort of data consumers. The Alpha phase is expected to be completed in 6 months.
- Remaining stages will be planned depending on outcomes of the Alpha.
- The Department will cease to provide ALL existing forms of data currently distributed to vendors at a future time to be determined through consultation.

Recap of last meeting – 10th November 2020

Data Model Overview

We introduced the initial data model; LI DataMart

- Data Model has approx. 20 tables. The foundation of which is the data used to publish the Legislative Instruments.
- Most tables have a foreign key to the Schedule table.
- There will be a 13 month rolling window of schedules.
- The core Item table captures one row per PBS item per TPP, MPP, MPPU, TPPU, MP and Schedule Month; using a new unique id.
- AMT data has been normalised to cater for the future possibility of a many-to-many relationship.
- There is a summary of changes table dedicated to describing the change-data-capture between schdules.



Recap of last meeting – 10th November 2020

Data Model Feedback

The working group asked questions relating to the location of specific data relating to more complex elements of the PBS such as units of measure for EFC and infusibles, Section 19a flags, complex authorities and exception flags.

Additionally, placeholder AMT codes, the formatting for restriction data and some general questions regarding the structure of the data model and naming were discussed.

API Discussion

- The group voiced a preference for keeping the API as simple as possible.
- The general consensus from the group was to use JSON/REST for the alpha release.
- There is an acknowledgement of FHIR being an emerging standard.

Alpha API Overview

Alpha API Overview

Technical Overview

- API Type: Restful
- Supported Output: JSON/CSV
- Host: Azure App Service

Constraints

- Backed by the Alpha Data Model, populated from a DEV environment
- Currently validating data structure, not yet validated data content.
- Not designed for Production Load
- Data limited to effective schedules (no Embargo data until authorisation process established)

Access Options

- Alpha URL: https://aucapiapppbspilot.azurewebsites.net/<command> (see examples slides 9-19)
- Alpha Developer notes will be added to https://dev.pbs.gov.au/data-distribution.html

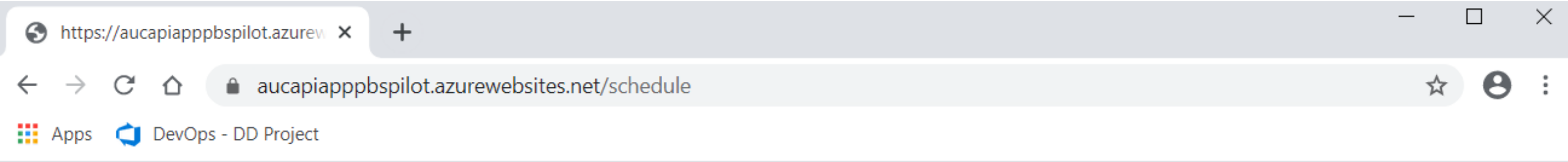
API Design Principles

API Design Principles

- Support the existing data release cadence.
- Intended for periodic data access.
- Provides clear changes between schedules and updates.
- Not intended to be called at the time of prescribe and dispense.
- Will replace all current data formats (XMLv2, XMLv3 and TXT extracts)

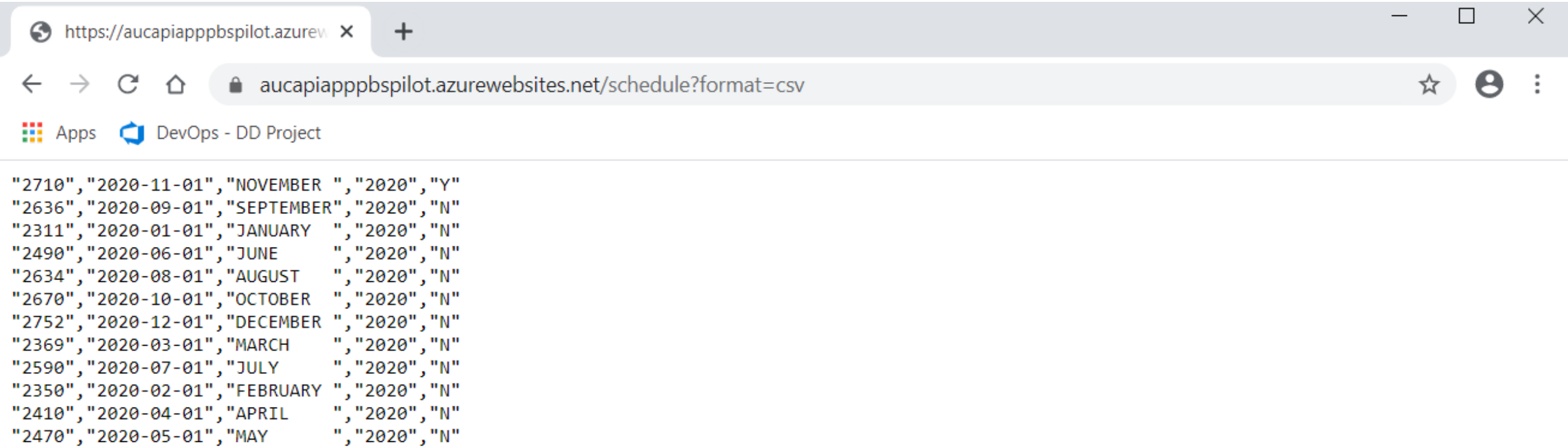
Activity – API Demonstration

Get all Schedules (default output: JSON)
https://aucapiapppbspilot.azurewebsites.net/schedule

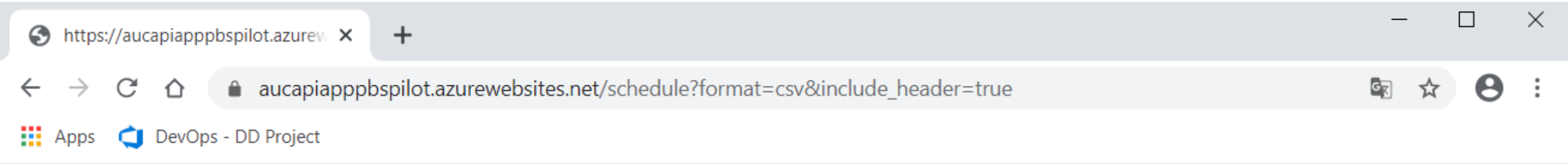



```
[{"schedulE_CODE":"2710","effectivE_DATE":"2020-11-01","effectivE_MONTH":"NOVEMBER ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"Y"},
{"schedulE_CODE":"2636","effectivE_DATE":"2020-09-01","effectivE_MONTH":"SEPTEMBER","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2311","effectivE_DATE":"2020-01-01","effectivE_MONTH":"JANUARY  ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2490","effectivE_DATE":"2020-06-01","effectivE_MONTH":"JUNE     ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2634","effectivE_DATE":"2020-08-01","effectivE_MONTH":"AUGUST   ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2670","effectivE_DATE":"2020-10-01","effectivE_MONTH":"OCTOBER  ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2752","effectivE_DATE":"2020-12-01","effectivE_MONTH":"DECEMBER ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2369","effectivE_DATE":"2020-03-01","effectivE_MONTH":"MARCH    ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2590","effectivE_DATE":"2020-07-01","effectivE_MONTH":"JULY     ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2350","effectivE_DATE":"2020-02-01","effectivE_MONTH":"FEBRUARY ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2410","effectivE_DATE":"2020-04-01","effectivE_MONTH":"APRIL    ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"},
{"schedulE_CODE":"2470","effectivE_DATE":"2020-05-01","effectivE_MONTH":"MAY      ","effectivE_YEAR":"2020","latesT_SCHEDULE_INDICATOR":"N"}]
```

Convert output to CSV
https://aucapiapppbspilot.azurewebsites.net/schedule?format=csv



Add a header row
https://aucapiapppbspilot.azurewebsites.net/schedule?format=csv&include_header=true

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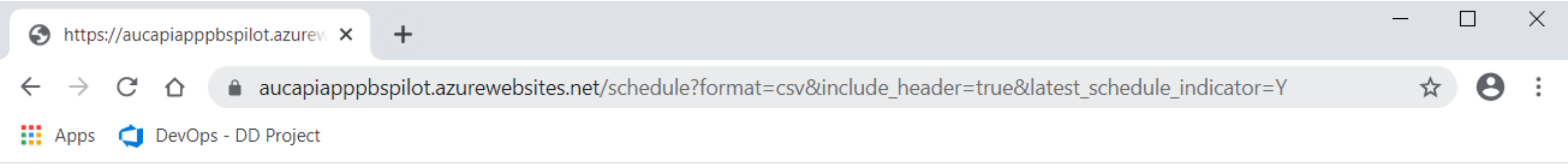
"SCHEDULE_CODE","EFFECTIVE_DATE","EFFECTIVE_MONTH","EFFECTIVE_YEAR","LATEST_SCHEDULE_INDICATOR"
"2710","2020-11-01","NOVEMBER ","2020","Y"
"2636","2020-09-01","SEPTEMBER","2020","N"
"2311","2020-01-01","JANUARY  ","2020","N"
"2490","2020-06-01","JUNE     ","2020","N"
"2634","2020-08-01","AUGUST   ","2020","N"
"2670","2020-10-01","OCTOBER  ","2020","N"
"2752","2020-12-01","DECEMBER ","2020","N"
"2369","2020-03-01","MARCH    ","2020","N"
"2590","2020-07-01","JULY     ","2020","N"
"2350","2020-02-01","FEBRUARY ","2020","N"
"2410","2020-04-01","APRIL    ","2020","N"
"2470","2020-05-01","MAY      ","2020","N"
```

Filter results to latest effective schedule (note: this is DEV environment hence November)
https://aucapiapppbspilot.azurewebsites.net/schedule?format=csv&include_header=true&latest_schedule_indicator=Y

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"SCHEDULE_CODE","EFFECTIVE_DATE","EFFECTIVE_MONTH","EFFECTIVE_YEAR","LATEST_SCHEDULE_INDICATOR"
"2710","2020-11-01","NOVEMBER ","2020","Y"
```
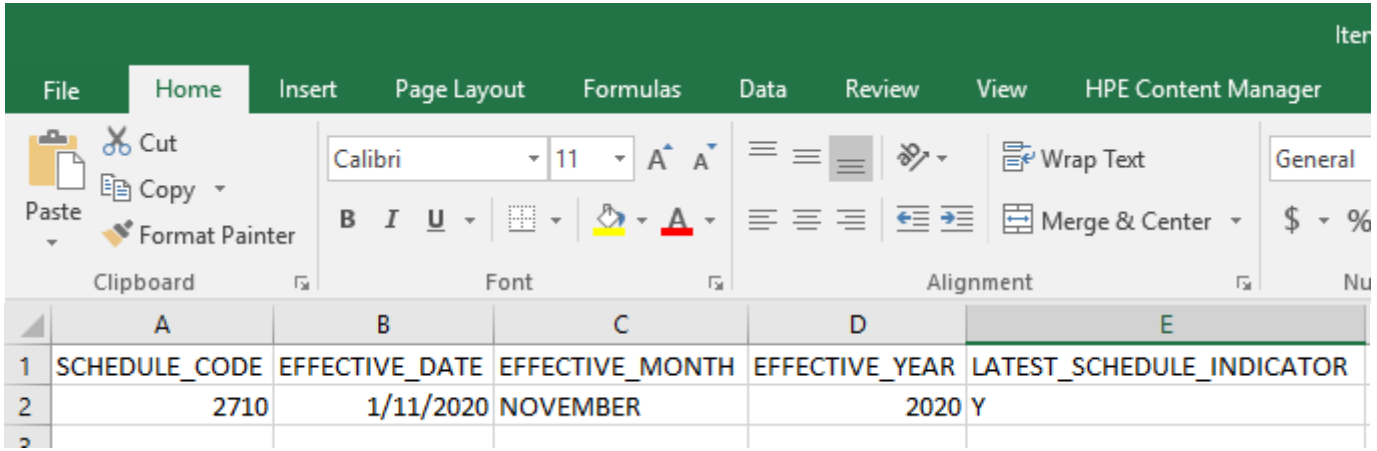
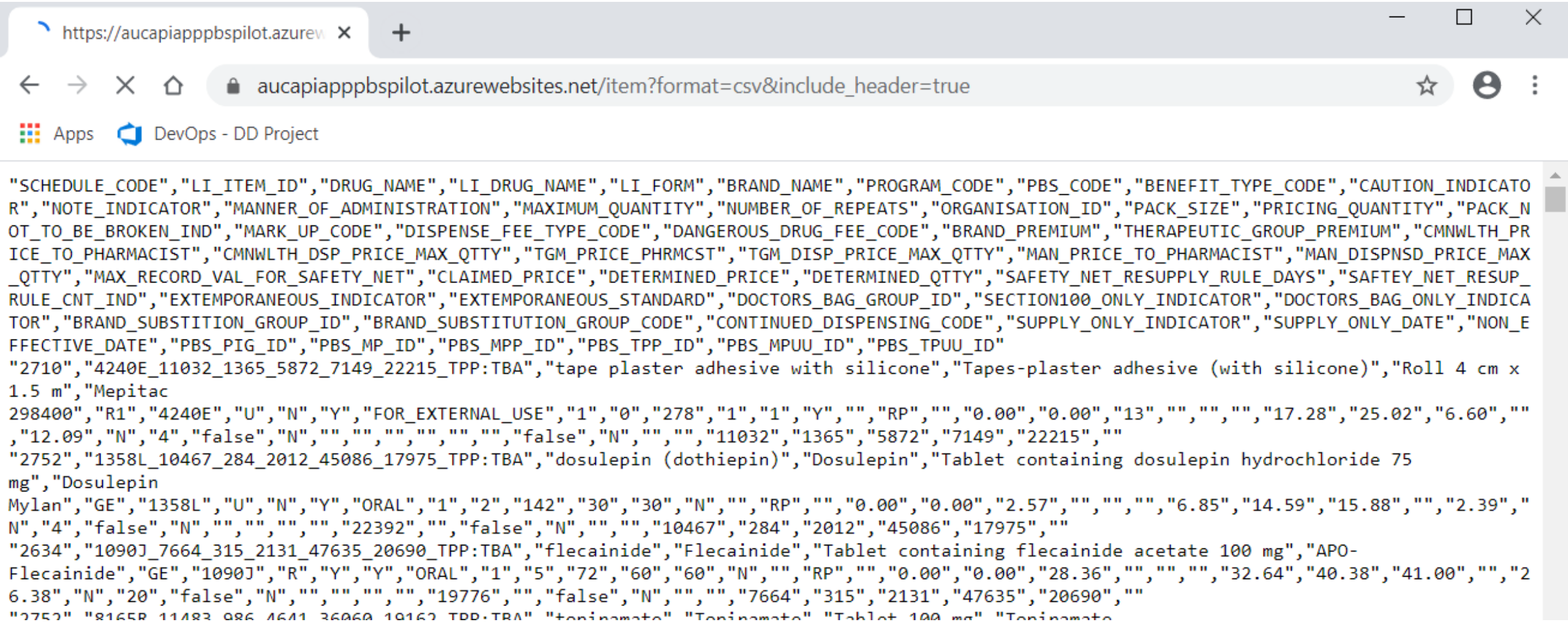
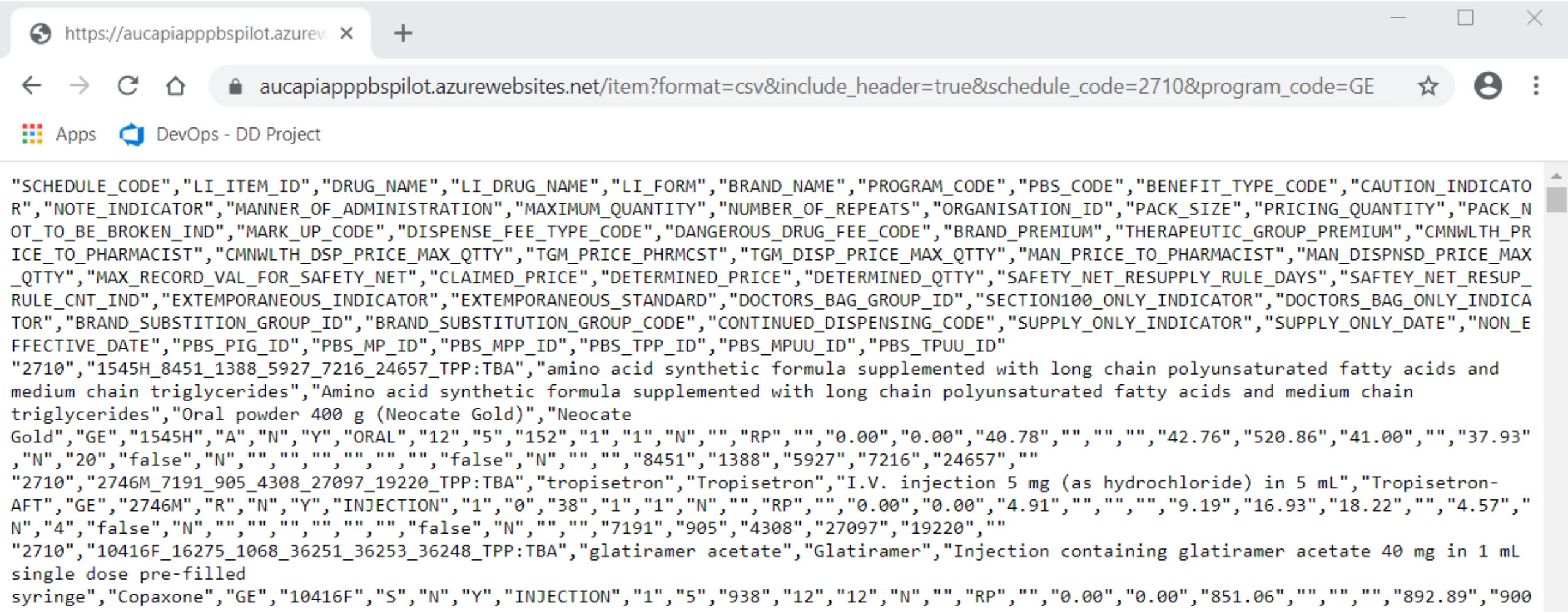



	A	B	C	D	E
1	SCHEDULE_CODE	EFFECTIVE_DATE	EFFECTIVE_MONTH	EFFECTIVE_YEAR	LATEST_SCHEDULE_INDICATOR
2	2710	1/11/2020	NOVEMBER	2020	Y

Get Items (in CSV format, with header row)
https://aucapiapppbspilot.azurewebsites.net/item?format=csv&include_header=true

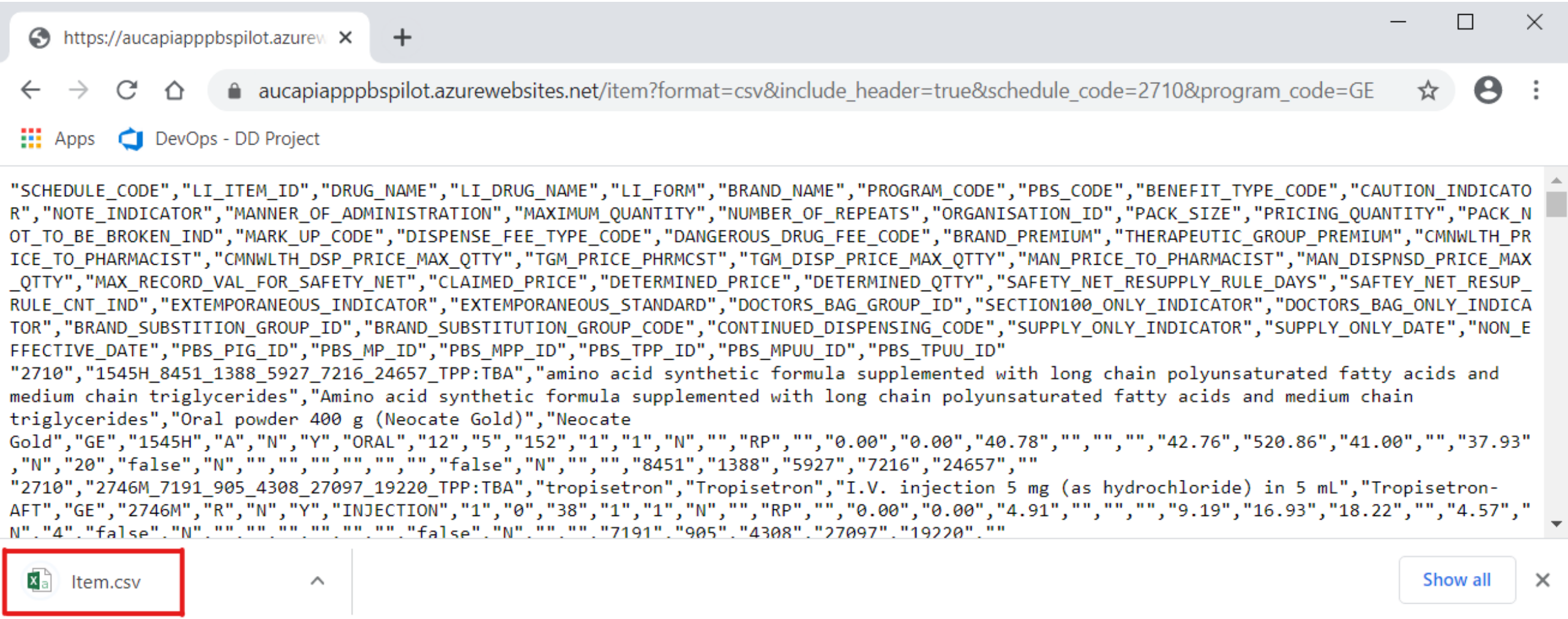


Get Items where Schedule Code =2710 (Nov 2020 schedule code), and Program Code = GE (General Schedule)
https://aucapiapppbspilot.azurewebsites.net/item?format=csv&include_header=true&schedule_code=2710&program_code=GE




```
"SCHEDULE_CODE","LI_ITEM_ID","DRUG_NAME","LI_DRUG_NAME","LI_FORM","BRAND_NAME","PROGRAM_CODE","PBS_CODE","BENEFIT_TYPE_CODE","CAUTION_INDICATOR","NOTE_INDICATOR","MANNER_OF_ADMINISTRATION","MAXIMUM_QUANTITY","NUMBER_OF_REPEATS","ORGANISATION_ID","PACK_SIZE","PRICING_QUANTITY","PACK_NOT_TO_BE_BROKEN_IND","MARK_UP_CODE","DISPENSE_FEE_TYPE_CODE","DANGEROUS_DRUG_FEE_CODE","BRAND_PREMIUM","THERAPEUTIC_GROUP_PREMIUM","CMNWLTH_PRICE_TO_PHARMACIST","CMNWLTH_DSP_PRICE_MAX_QTTY","TGM_PRICE_PHRMCST","TGM_DISP_PRICE_MAX_QTTY","MAN_PRICE_TO_PHARMACIST","MAN_DISPNSD_PRICE_MAX_QTTY","MAX_RECORD_VAL_FOR_SAFETY_NET","CLAIMED_PRICE","DETERMINED_PRICE","DETERMINED_QTTY","SAFETY_NET_RESUPPLY_RULE_DAYS","SAFTEY_NET_RESUP_RULE_CNT_IND","EXTEMPORANEOUS_INDICATOR","EXTEMPORANEOUS_STANDARD","DOCTORS_BAG_GROUP_ID","SECTION100_ONLY_INDICATOR","DOCTORS_BAG_ONLY_INDICATOR","BRAND_SUBSTITION_GROUP_ID","BRAND_SUBSTITUTION_GROUP_CODE","CONTINUED_DISPENSING_CODE","SUPPLY_ONLY_INDICATOR","SUPPLY_ONLY_DATE","NON_EFFECTIVE_DATE","PBS_PIG_ID","PBS_MP_ID","PBS_MPP_ID","PBS_TPP_ID","PBS_MPUU_ID","PBS_TPUU_ID"
"2710","1545H_8451_1388_5927_7216_24657_TPP:TBA","amino acid synthetic formula supplemented with long chain polyunsaturated fatty acids and medium chain triglycerides","Amino acid synthetic formula supplemented with long chain polyunsaturated fatty acids and medium chain triglycerides","Oral powder 400 g (Neocate Gold)","Neocate Gold","GE","1545H","A","N","Y","ORAL","12","5","152","1","1","N","","RP","","0.00","0.00","40.78","","","","42.76","520.86","41.00","","37.93","N","20","false","N","","","","","","","","false","N","","","8451","1388","5927","7216","24657",""
"2710","2746M_7191_905_4308_27097_19220_TPP:TBA","tropisetron","Tropisetron","I.V. injection 5 mg (as hydrochloride) in 5 mL","Tropisetron-AFT","GE","2746M","R","N","Y","INJECTION","1","0","38","1","1","N","","RP","","0.00","0.00","4.91","","","","9.19","16.93","18.22","","4.57","N","4","false","N","","","","","","","","false","N","","","7191","905","4308","27097","19220",""
"2710","10416F_16275_1068_36251_36253_36248_TPP:TBA","glatiramer acetate","Glatiramer","Injection containing glatiramer acetate 40 mg in 1 mL single dose pre-filled syringe","Copaxone","GE","10416F","S","N","Y","INJECTION","1","5","938","12","12","N","","RP","","0.00","0.00","851.06","","","","892.89","900
```

Download the results to CSV
https://aucapiapppbspilot.azurewebsites.net/item?format=csv&include_header=true&schedule_code=2710&program_code=GE&download=true



Australian Government
Department of Health

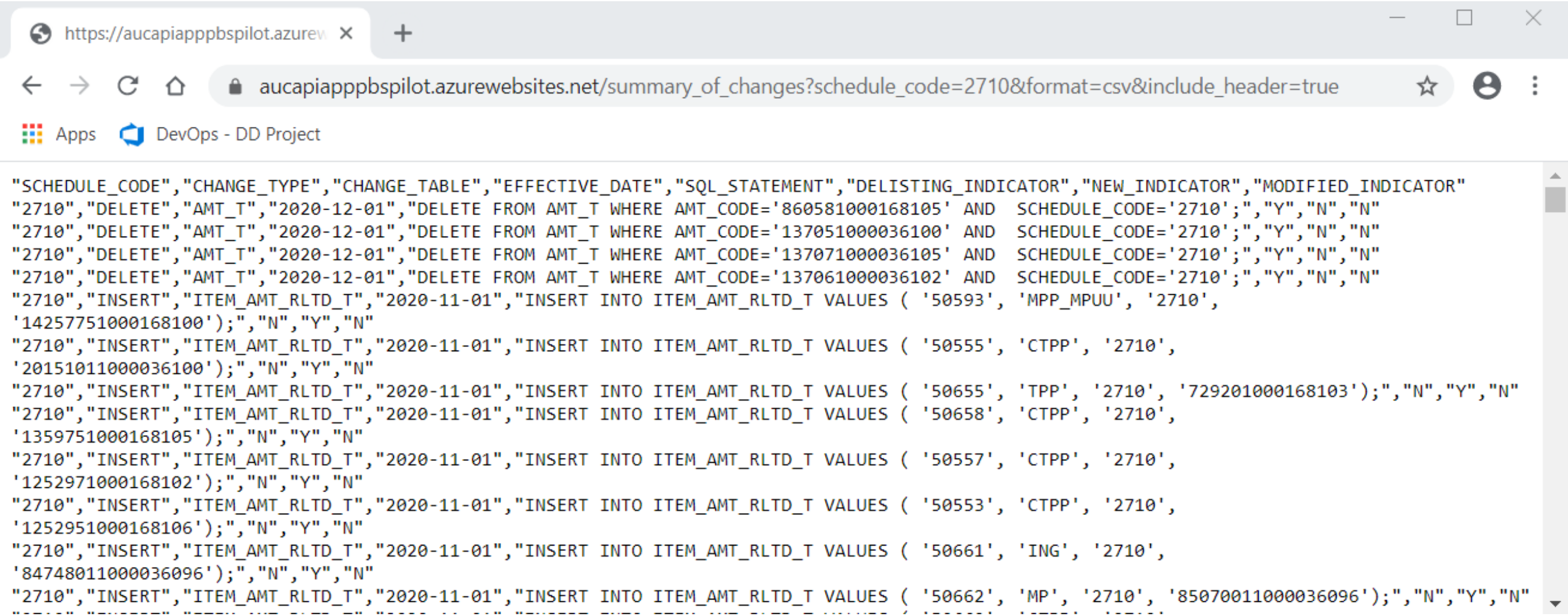
A1 SCHEDULE_CODE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	SCHEDULE	LI_ITEM_ID	DRUG_NAME	LI_DRUG_NAME	LI_FORM	BRAND_NAME	PROGF	PBS_CODE	BENEFIT_T	CAUTION_	NOTE_IND	MANNER_	MAXIMUN	NUMBER_	ORGANISA	PACK_SIZE	PRICIN
2	2710	1545H_8451_138	amino acid synthetic	Amino acid synthetic	Oral powder 400 g (Neoc	Neocate Gold	GE	1545H	A	N	Y	ORAL	12	5	152	1	
3	2710	2746M_7191_90	tropisetron	Tropisetron	I.V. injection 5 mg (as hy	Tropisetron-AFT	GE	2746M	R	N	Y	INJECTION	1	0	38	1	
4	2710	10416F_16275_1	glatiramer acetate	Glatiramer	Injection containing glat	Copaxone	GE	10416F	S	N	Y	INJECTION	1	5	938	12	
5	2710	2977Q_12073_1	ampicillin	Ampicillin	Powder for injection 1 g	Austrapen	GE	2977Q	U	N	N	INJECTION	1	1	142	5	
6	2710	8696Q_8635_11	pioglitazone	Pioglitazone	Tablet 45 mg (as hydroch	NOUMED PIOGLITAZC	GE	8696Q	S	N	Y	ORAL	1	5	1628	28	
7	2710	8170B_12247_9	olanzapine	Olanzapine	Tablet 2.5 mg	Olanzapine Sandoz	GE	8170B	S	N	Y	ORAL	1	5	90	28	
8	2710	9360P_8889_131	posaconazole	Posaconazole	Oral suspension 40 mg p	Noxafil	GE	9360P	A	N	Y	ORAL	1	0	10	1	
9	2710	8331L_12555_15	omeprazole	Omeprazole	Tablet 20 mg	Omeprazole AN	GE	8331L	S	N	Y	ORAL	1	1	697	30	
10	2710	8654L_11477_11	levetiracetam	Levetiracetam	Tablet 250 mg	Levetiracetam SZ	GE	8654L	S	N	Y	ORAL	1	5	90	60	
11	2710	11563N_22440_4	ertugliflozin + metfor	Ertugliflozin with met	Tablet containing 7.5 mg	Segluromet 7.5/1000	GE	11563N	S	N	Y	ORAL	1	5	10	56	
12	2710	8354Q_11395_1	salbutamol	Salbutamol	Pressurised inhalation ir	Airomir Autohaler	GE	8354Q	R	N	Y	INHALATI	2	5	1348	1	
13	2710	10007Q_14069_	fluticasone propionat	Fluticasone propionat	Pressurised inhalation c	flutiform 125/5	GE	10007Q	S	N	Y	INHALATI	1	5	134	1	
14	2710	1158Y_11113_22	cimetidine	Cimetidine	Tablet 400 mg	Magicul 400	GE	1158Y	U	N	Y	ORAL	1	5	142	60	
15	2710	8435Y_10070_10	insulin aspart	Insulin aspart	Injections (human analo	NovoRapid Penfill 3 r	GE	8435Y	U	N	N	INJECTION	5	1	51	1	
16	2710	5435C_9377_871	enoxaparin sodium	Enoxaparin	Injection containing eno	Clexane	GE	5435C	R	N	Y	INJECTION	2	3	42	10	
17	2710	1007B_11093_12	aciclovir	Aciclovir	Tablet 200 mg	Aciclovir GH	GE	1007B	S	N	Y	ORAL	1	5	145	90	
18	2710	11305B_21622_4	saxagliptin + dapaglif	Saxagliptin with dapa	Tablet containing saxagli	Qtern 5/10	GE	11305B	S	N	Y	ORAL	1	5	76	28	
19	2710	2174K_10572_60	levothyroxine	Levothyroxine	Tablet containing 50 mic	Eutroxsig	GE	2174K	U	N	Y	ORAL	1	1	70	200	2
20	2710	1977C_11966_54	ranitidine	Ranitidine	Tablet 300 mg (as hydroc	Ausran	GE	1977C	U	N	Y	ORAL	1	5	1081	30	
21	2710	8355R_10010_10	telmisartan	Telmisartan	Tablet 40 mg	Teltartan	GE	8355R	U	N	N	ORAL	1	5	1081	28	
22	2710	2971J_23577_61	triamcinolone + neom	Triamcinolone with n	Ear drops containing tria	Otocomb Otic	GE	2971J	U	N	N	APPLICATI	1	2	70	1	
23	2710	11984R_23360_4	brigatinib	Brigatinib	Tablet 180 mg	Alunbrig	GE	11984R	A	N	Y	ORAL	1	3	104	28	
24	2710	5506T_11284_15	carmellose sodium	Carmellose	Eye drops containing car	Optifresh Tears	GE	5506T	S	N	Y	APPLICATI	3	5	29	1	
25	2710	1358L_10467_28	dosulepin (dothiepin	Dosulepin	Tablet containing dosule	Dosulepin Mylan	GE	1358L	U	N	Y	ORAL	1	2	142	30	
26	2710	9376L_9566_131	amlodipine + valsarta	Amlodipine with vals	Tablet 5 mg (as besilate)	Exforge 5/160	GE	9376L	R	N	Y	ORAL	1	5	25	28	
27	2710	1616C_11902_44	minocycline	Minocycline	Tablet 50 mg (as hydroch	Minomycin-50	GE	1616C	R	Y	Y	ORAL	1	5	70	60	
28	2710	8694N_7932_11	pioglitazone	Pioglitazone	Tablet 15 mg (as hydroch	APOTEX-Pioglitazone	GE	8694N	S	N	Y	ORAL	1	5	72	28	

Item

Ready 100%

See the Summary of Changes for the last schedule
https://aucapiapppbspilot.azurewebsites.net/summary_of_changes?schedule_code=2710&format=csv&include_header=true




```
"SCHEDULE_CODE","CHANGE_TYPE","CHANGE_TABLE","EFFECTIVE_DATE","SQL_STATEMENT","DELISTING_INDICATOR","NEW_INDICATOR","MODIFIED_INDICATOR"
"2710","DELETE","AMT_T","2020-12-01","DELETE FROM AMT_T WHERE AMT_CODE='860581000168105' AND  SCHEDULE_CODE='2710';","Y","N","N"
"2710","DELETE","AMT_T","2020-12-01","DELETE FROM AMT_T WHERE AMT_CODE='137051000036100' AND  SCHEDULE_CODE='2710';","Y","N","N"
"2710","DELETE","AMT_T","2020-12-01","DELETE FROM AMT_T WHERE AMT_CODE='137071000036105' AND  SCHEDULE_CODE='2710';","Y","N","N"
"2710","DELETE","AMT_T","2020-12-01","DELETE FROM AMT_T WHERE AMT_CODE='137061000036102' AND  SCHEDULE_CODE='2710';","Y","N","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50593', 'MPP_MPUU', '2710',
'14257751000168100');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50555', 'CTPP', '2710',
'20151011000036100');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50655', 'TPP', '2710', '729201000168103');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50658', 'CTPP', '2710',
'1359751000168105');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50557', 'CTPP', '2710',
'1252971000168102');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50553', 'CTPP', '2710',
'1252951000168106');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50661', 'ING', '2710',
'84748011000036096');","N","Y","N"
"2710","INSERT","ITEM_AMT_RLTD_T","2020-11-01","INSERT INTO ITEM_AMT_RLTD_T VALUES ( '50662', 'MP', '2710', '85070011000036096');","N","Y","N"
```

Discussion – Testing and Feedback

Testing and Feedback

It is critical that we give the Alpha rigorous testing and fully understand any issues or preferences for its use. To that end we would like you to provide some structured feedback for the scenarios that you test against.

The below table is just an example – please modify as appropriate to your needs.

Brief Description	Prescribe or Dispense	Scenario Setting	Data Successfully used	Missing Elements?	Comments
E.g. Dispense of substitute drug for unstocked item.	*E.g. Dispense*	*E.g. Pharmacy*	*E.g. Tables X, Y and Z.*	*E.g. none* *E.g. xxx field normally found in "example.txt"*	*E.g. All required data available*

Next Steps

Next Steps

Homework

Please capture basic information about the scenarios you have tested (even those that work well) so we can get a complete picture of how the API will be used and enable sharing and troubleshooting.

Software Vendor Working Group #4 – week commencing 8 February 2021

More information to be distributed ahead of the next meeting.

Questions and Feedback

Send any questions or feedback to pbsdataproject@health.gov.au.

Other Business and Questions